

Australian Commodore &

AMIGA

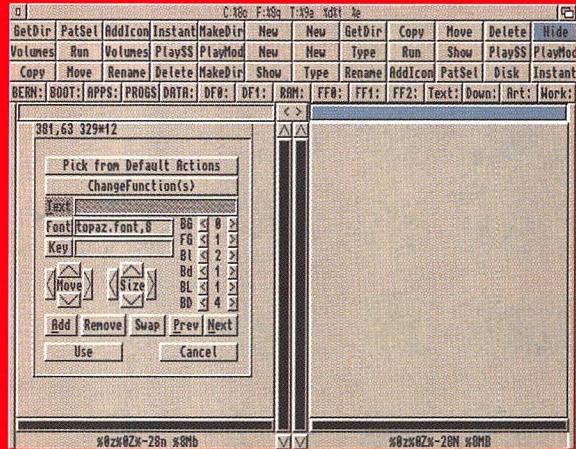
For Professional and Home Users

Review

**DIRWORK 2
Reviewed**

**Asian company
negotiating to buy
Amiga technology**

**Adpro 2.5
Full Review**



**Getting into
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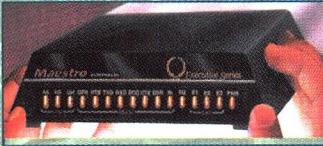
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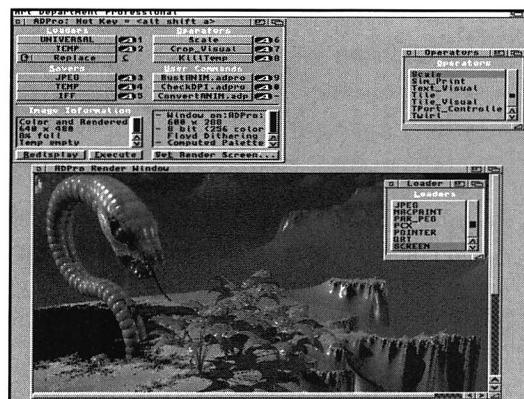
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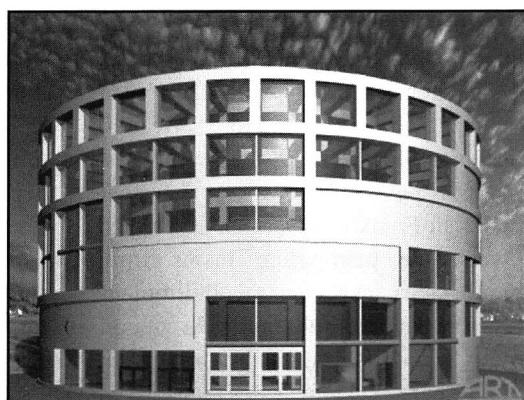
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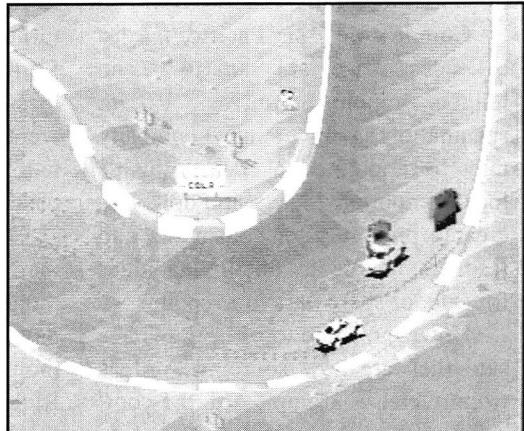
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65 Skidmarks

Asian company negotiating for Amiga technology

It has been confirmed that a large Asian company is currently negotiating with Commodore International to possibly buy out the entire operation. News of the likely takeover has been met very favourably by the Amiga industry.

Indeed, many producers of Amiga peripherals and software have posted official statements confirming their commitment to the technology regardless of the outcome of current discussions.

Urgent meetings with the Asian company at Commodore Westchester's old head office early this month paved the way for further talks in Frankfurt, Germany. Late last week the negotiating teams from both sides inspected the Philippines factory and toured the U.K. operation, which is responsible for the lion's share of Amiga sales.

However, according to sources, important issues remain unresolved and the current situation could continue to drag on for some weeks.

Commodore Asia Pacific, the local sales office, are said to be no longer shipping Amigas. Recent speculation is that a new company may be appointed as the exclusive local importer. The situation has created problems for consumers and resellers unable to obtain machines for sale, or spare parts for repairs.

However, some local dealers have said they are now sourcing Amigas from overseas. Compu-Aid, the company appointed by Commodore Asia Pacific to handle warranty in Australia, has also stated they are now

able to obtain spare parts to continue providing repair work. Under the new temporary arrangement, warranty repairs will include free labour, but the cost of parts will be shared between Compu-Aid and consumers.

The identity of the major investor has not been officially announced, however there is good reason to believe it is Samsung. If Samsung Electronics is involved, the Amiga's future looks bright. (see inset)

In the meantime, you could order your First Annual Commodore Deathbed Vigil Party T-Shirts. The April 30th special event attracted people from all over the east coast of America. Some flew in, AmigaWorld sent a reporter and many talented individuals who had helped to build one of the most amazing personal computers in history joined the party to pay their respects.

Dave Haynie, Gail Wellington, Intuition guru Peter Cherna, Carolyn Scheppner, Jeff Porter, Andy Finkel, Bryce Nesbitt and dozens more turned up to help lower the flag at the Commodore plant to half mast. In a message posted on the Internet, we were asked to dim our monitors to half brightness in respect for the passing of Commodore.

You see, despite the fact that many of these people blame Commodore for where the Amiga isn't today, they also pay respect to Commodore for what it did achieve - the Richard Nixon of computer manufacturers.

In the spirit of the great Amiga wake parties of the past, they de-

signed a Deathbed Vigil T-Shirt. It plays on the NewTek spin-off "Play" button, and Scala's "Fast Forward" shirt. Theirs has an eject button with the words "Commodore Deathbed Vigil April 30, 1994." The back will be signed by members of the Commodore development team, most of the original Amiga design team, Commodore employees as of the last week and people of the party. A local source of the T-Shirt will be announced soon.

To all Amiga owners, I suggest you hang in there. All is not lost. If the local dealers have their way, you'll be able to buy Amigas again by now. The warranty issue will remain - however make certain your dealer understands that a computer cannot be sold without a warranty. Likewise, it is the dealer you purchased from, not Commodore who must honour any warranty repairs.

Exhibition Update

On a sad note, the World of Commodore advertised by some publications as part of the Home Computer Show is likely to be a fairly empty event. Many dealers have said they will not attend.

Furthermore, until the local Amiga community can find its feet, the major Ami-Expo show planned for July 15-17 has also been postponed until further notice. The organisers - which includes myself - promise it will happen later in the year. Keep reading Amiga Review for further announcements.

Andrew Farrell

Who is Samsung?

Not that we have any official word, but we thought you might be interested to know a little about Samsung Electronics. In 1993, corporate revenue for the company reached around US\$53 billion. As an electronics company, they're bigger than Compaq - and almost as big as IBM.

They have the manufacturing rights for Hewlett-Packard's reduced instruction set computing chip set, and have had plenty of experience in the computer market trying to cost reduce high performance hardware.

Samsung Electronics (SEC) are the world's leading maker of dynamic random access memory, a very profitable operation. This strength has helped SEC forge useful relationships. Richard Warmington, Hewlett Packard's representative director at Samsung Hewlett-Packard, which sells HP computers in Korea, says SEC's strength in semiconductors was a major factor in HP's selection of SEC as a business and development partner.

Samsung Electronics entered the interactive digital set-top fray recently, reaching an agreement to provide a video dial tone (VDT) packager USA Video with

terminals for deployment in Bell Atlantic Corp, U S West Inc. and other dial tone networks.

Through the agreement, Samsung will provide set-tops free to USA Video. In exchange, Samsung will use USA Video's patented Video On Demand and Video Yellow Pages hardware and software designs to make and sell set-tops to other Video Dial Tone providers, MSOs and retail outlets ...

In addition to cable manufacturers GI, Scientific-Atlanta Inc. and Zenith Electronics Corp, the digital set-top race now includes computer giants Hewlett-Packard Co, IBM, Intel Corp, Apple Computer Inc. and AT&T, as well as consumer electronics powerhouses Thomson Consumer Electronics and Philips Consumer Electronics.

"There is an emerging interactive market," said Samsung marketing vice president John Garrison, "and for anybody like us with semiconductor and consumer electronics manufacturing, involvement in the on-ramp is the right direction."

Our advice ... keep a close eye on these guys.

STOP PRESS

Read the Computer Vision column in Monday's Sydney Morning Herald Computer Section, or the Mainly Amiga column in Tuesday's Melbourne Age for updates to the Commodore International and local Amiga situation.

For an update at any time during business hours call (02) 879 7455.

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CD32 add on for A1200 and A4000

The CeBit computer fair in Hannover attracted some 5,800 exhibitors and an amazing 650,000 visitors. CeBit is huge; buses help you move from one hall to the next, there's hotels, restaurants, post offices and even a church.

Commodore was there. They showed the Amiga 4000 tower - a machine that was debuted a year ago. Boasting SCSI-II on the motherboard, two video slots and an '040 processor, the tower

promises to be a popular choice for the desktop video market.

Commodore also revealed their A4000 CD expansion, a device which I believe they should be trying desperately to sell. The consumer PC market is currently being driven by CD-ROM applications. Although you can easily add a CD-ROM drive to any Amiga, the best titles will require compatibility with CD-32. The catch is that CD32 has a new chip called

CD32 1200 rear view



Removable Drive Storage hits 270Mb!

Syquest have upped the ante yet again in the removable media stakes. The new SQ3105 and SQ3270 offer 105Mb and 270Mb of formatted storage at speeds that would put some hard drives on edge. The higher capacity unit can still read the earlier formats. The unit is available as IDE or SCSI II, so it's ideal for the Amiga

4000.

Using a SCSI interface, the Syquest will happily churn up to 4Mb of data per second into your Amiga, but typically a sustained rate of around 1.4Mb's can be expected. The external drives go for \$1299, and the cartridges are around \$140. For more information call CPA on (02) 337 6255.



CD32 1200 front view

AKIKO not found in any other Amiga.

The A4000 CD includes this chip, as well as the ability to play MPEG video. This is great news, since the MPEG play back is controlled by a standard system device (*mpeg.device*) and therefore digital video can be played direct from hard drive. It should be extremely easy to do presentations from an Amiga 4000 including live video, with standard graphics keyed on top. Programs like *Scala MM* will likely support the board.

A version for the Amiga 1200 was also shown. The CD1200 is

a stand-alone unit which you connect with a cable. The unit shown was more prototype looking than the CD4000. Unfortunately, the CD1200 cannot be expanded with MPEG for the time being.

The head of Commodore Germany, Alvin Stumpf, shrugged off the inevitable questions of AAA and RISC machines, saying that he only wanted to announce new machines when he could ship them a few days later. But he admitted that he will announce some new devices later this year.

Is Compaq afraid of Amiga?

From a recent *Computer Weekly* (UK trade magazine) - PC maker Compaq has turned its sights on rival Commodore, saying that it must overcome the Amiga manufacturer if Compaq is to remain a major player in the UK.

Compaq's UK managing director, Joe McNally, said although Commodore is not strong in the UK PC market-

place, its dominance in the retail arena, with the Amiga games computer, is a major problem for Compaq to deal with.

"If we haven't beat Commodore in the retail world by this time next year we will definitely not be the major player we are now," commented McNally. We'll be watching!

CD32 is now Expandable

Recognised as the ideal delivery platform for kiosk applications, dedicated multimedia training systems and of course, having fun, CD32 is set to make further inroads into the multimedia presentation area. The new Communicator connects your CD32 to another Amiga, offering a range of possible applications.

You can turn the CD32 into an intelligent CD-ROM drive, control it from *Scala* to start audio or even Mpeg tracks, view image discs or upload and start programs on the CD32, turning the

console into a powerful stand-alone computer with communication and graphics capacities far better than CD-I.

The Communicator plugs into the keyboard plug and doesn't occupy the expansion slot. CD32s contain a dual speed, multi-session CD-ROM drive. With the Communicator, sending files from Amiga to CD32 is achieved with a speed of up to 115200 baud! Because of intelligent multi-tasking, both the CD32 and Amiga can perform other tasks while exchanging data. The internal logic of the com-

municator takes care of error correction and insures error free data transfer.

Scala specially wrote a new EX module for Eureka's Communicator, allowing control of both audio CD's and full motion video CD's (when an MPEG cartridge is installed). So, this makes CD32 a full blown Mpeg player station for scala.

The Communicator comes with high speed MIDI IN/OUT and THRU plug. MIDI can be used from the CD32 or Amiga side. The Communicator can also be used as stand alone MIDI interface on the amiga

or CD32. Popular programs such as Bars&Pipes, Helm, Scala and many more can use Midi to control anything from keyboards up to drum-computers.

The Communicator also supports a Photo-mode which enables it to display PhotoCD disks. When you're up and running, CD32's control pad emulates a mouse. The Workbench, a terminal program and Scala backgrounds are available on the CD. Spare room of the CD is filled with PD software.

For more information and pricing contact Fonhof Computer Supplies on (02) 639 7718 or Fax (02) 639 5995.



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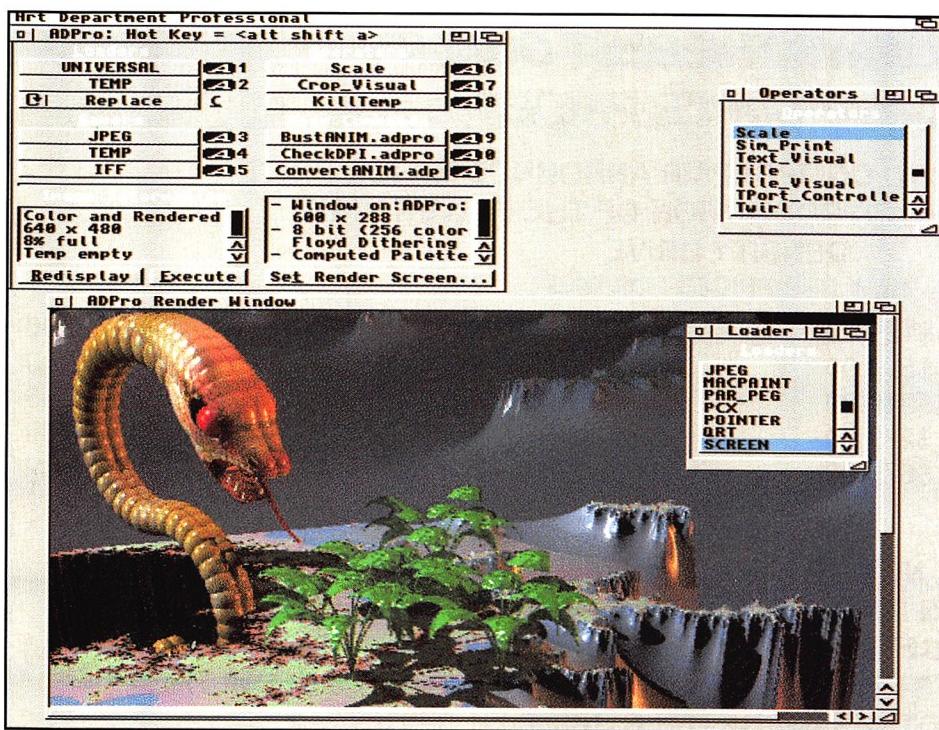
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Art Department Professional 2.5

by Daniel Rutter

The Amiga's combination of low price and high powered built in video is one of its strongest selling points - but all the hardware in the world is no use without software, and the most popular high powered image processing software on the Amiga is Art Department Professional, from ASDG Incorporated.



ADPro, as it's invariably known, is used every day at the ACAR office, primarily for converting images from GIF, PCX and whatever other formats people decide to send them in. We also use the program to trim images to size, and to apply gamma correction, which brightens images without losing much detail, something you often have to do with pictures for publication.

This doesn't even scratch the surface of what you can do with ADPro. The program is designed as a control centre for piles of modules, grouped into loaders, savers and operators. Loaders and savers work with standard disk files of various formats, but can also do things like driving scanners or saving images to the frame buffers of 24 bit graphics cards.

Operators let you process image data in all sorts of ways, as you can see from the example pictures with this article. These pictures don't by any means show all of the possible ADPro effects; they're just the ones that look interesting in print, and there are often infinitely variable settings for an effect.

ADPro comes with a load of loaders, savers and operators, and makers of extra graphic gear generally make their own that just need to be copied into the right directory to work. Want to use a monster



The unprocessed image



Antique



Fresco

UMAX scanner from your Amiga? Just get the loader. Want to output to a Primera dye-sublimation printer? Just get the saver (actually, the Primera one's included!). And so on.

The interface

ADPro, in days of yore, was instantly recognisable. The makers of the program decided to create their own interface rather than use the perfectly serviceable one supplied by Commodore, a sin shared by many Amiga application programmers. Home-made interfaces are certainly distinctive and may be quite efficient, but they make the user relearn the computer when there's really no need.

Thankfully, the old ADPro interface is gone, replaced by an operating system compliant front end which can even open on the Workbench if you want, with loader, saver and operator lists in their own windows, along with the main control panel.

To describe all of ADPro's features would take an article about as big as its

excellent 527 page manual; essentially, it can handle the vast bulk of image or even animation manipulation tasks.

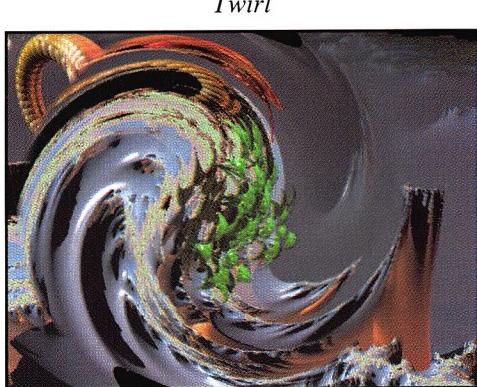
What existing ADPro users want to know is - what's new? The answer - plenty! The user interface now sports keyboard control of most options, so with practice you can play ADPro like a piano and seldom have to touch the mouse at all. You can also set up your three favourite loaders, savers, operators and user commands as quick access buttons, so you don't have to choose from a big list every time you want to crop an image, for example.

As part of the interface standardisation, you now pick your rendering screen from a standard screenmode requester (actually a bit slower than the old way, but not much), and all file operations are via completely standard ASL or req.library requesters.

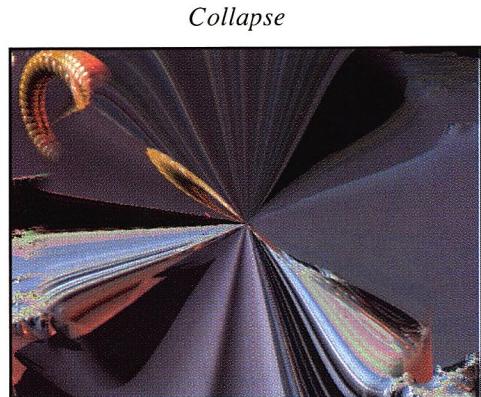
ADPro is now a commodity, so you can pop it to the front with a hotkey. This isn't exactly a usability breakthrough, but it shows the extent of ASDG's commitment to getting it right.



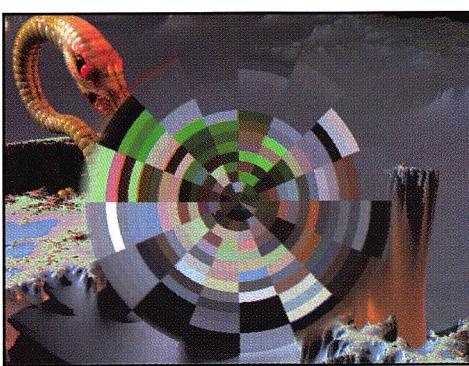
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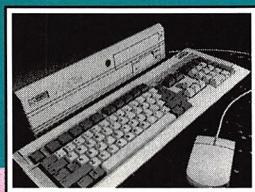
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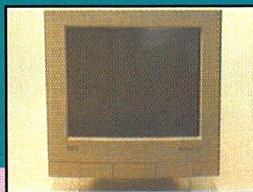
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Rotate



Negative

You can have open as many or as few of the list windows as you like; if you're not doing much, just run ADPro with the main window and maybe the Operators one open. If you're jumping through hoops, you can have the loader and saver lists too.

Some of the modules still have the old look, because they've not been changed since the previous version. This is not a big problem, though; in fact, the hangovers like hitting shift-return to accept settings and proceed are rather handy.

Working with images

Image compositing has been greatly enhanced. You can line your images up on a nice big visual screen now instead of squinting at a weeny window, and there

are yet more keyboard shortcuts to make the process less painful. In a related development, you can now define transparency ranges, so a given spread of colours can be deemed transparent for those images with an annoying, grainy background that's only really black in parts.

There are now two levels of colour accuracy, Normal and Enhanced. Enhanced accuracy isn't explained in any technical detail, but basically it makes pictures look better on high colour display systems - 256 colour and above - and it only takes a bit longer. The effect on old style ECS pictures is slight - you can pick a slight roughening of edges on a Normal accuracy HAM picture compared with an Enhanced one, but it's only noticeable if you display them in succession.

Since Enhanced accuracy only makes ADPro marginally slower (a few per cent), it doesn't hurt to use it all the time, unless you really need the extra 300k of RAM it consumes - and as I'll explain shortly, memory misers still won't like ADPro at all.

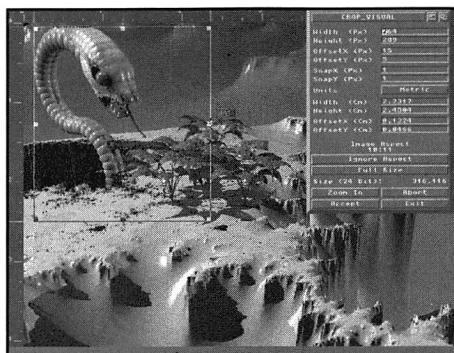
Fred

The FFrame EDitor is now a lot more useful than it used to be. FRED's main mission in life is to process lots of images automatically, so you only have to set your options once and then play Yahtzee on the Workbench until the deed is done. FRED is actually a completely separate program from ADPro, but it is not very useful unless ADPro's running at the same time. It's now possible to open ADPro on

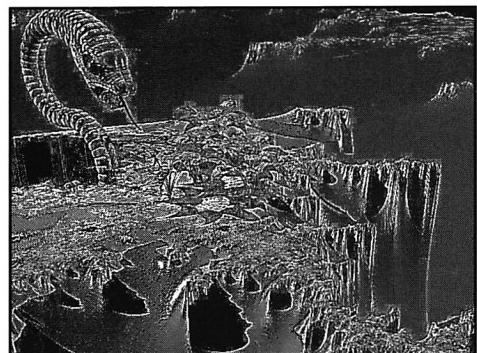
Line Art

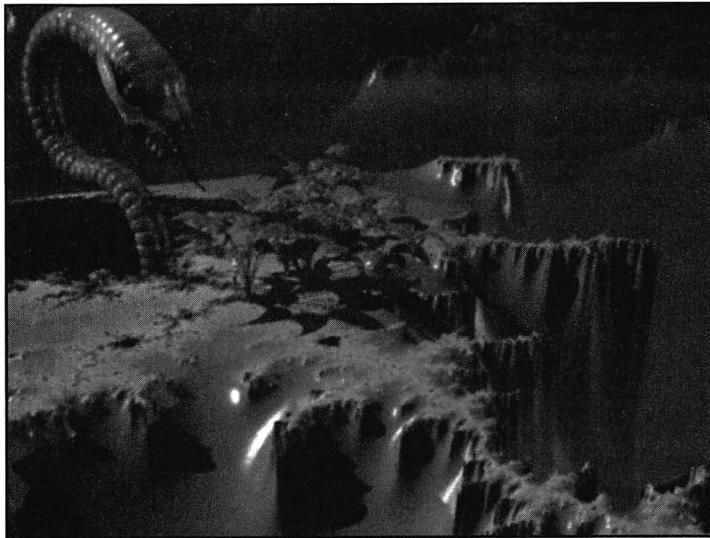


Crop Visual

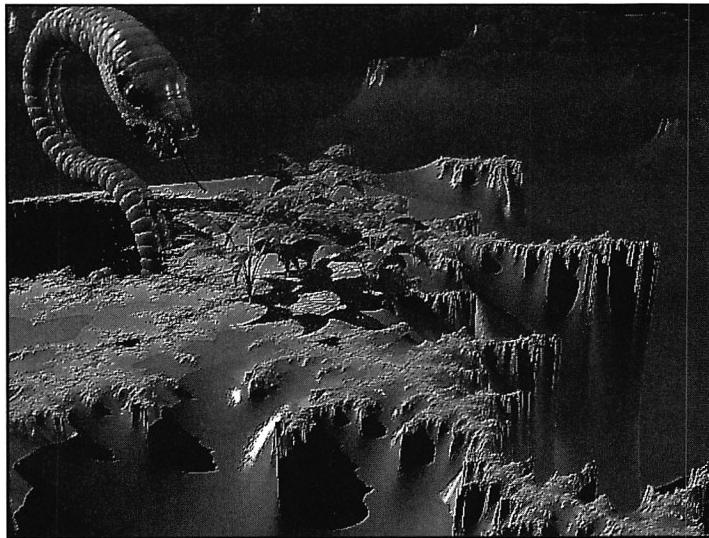


Sharpen (one of many Convolve options)





Blur



Woodcut (another Convolution)

FRED's screen, for extra efficiency.

For me, the FRED update means that batch image processing can finally be done without getting technical. If we need to convert 172 IFF images to PCX with 15% gamma correction on each, we can do it with only about twice as much effort as converting one picture.

FRED can show thumbnails (miniatures) of all the images you've loaded, and perform operations on them all in sequence, including turning them into an animation in various ways. Naturally, ADPro also lets you strip animations into their component frames.

FRED itself deals in sequence files - lists of images. The accompanying Cinemorph sub-program can process multiple sequence files, for even wider scope. The Compositor lets FRED easily build

fades, wipes and compositions between frames; it replaces the earlier Compositor and Alpha_Compositor AnimOps. The simpler Time Stretch utility lets you interpolate frames into an animation, to change its length to perfectly fit a given time space, frame rate or whatever.

All of these programs draw on ADPro's modules to do their jobs, and all of them communicate with ADPro via ARexx, which true Power Users can also do themselves. Every feature of ADPro has an ARexx command to match, so you can automate the entire program to do whatever baroquely complex series of operations you wish, triggered by and interacting with any other ARexx-aware program.

The amount of integration you can achieve with ARexx is staggering, but many users will never touch it, for the

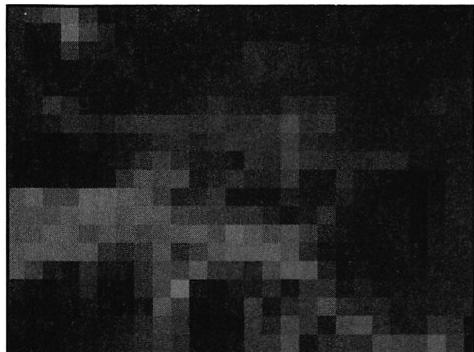
simple reason that all the basic ARexx-related functions, for example stringing together ADPro operations to make an emboss operator, have already been set up for you and all you need to do is click in an operator list or pick one of FRED's myriad scripts.

Some things remain impossible without hitting ARexx, but the average user needn't worry. If you can't do it with the built in functions, you probably don't really want to.

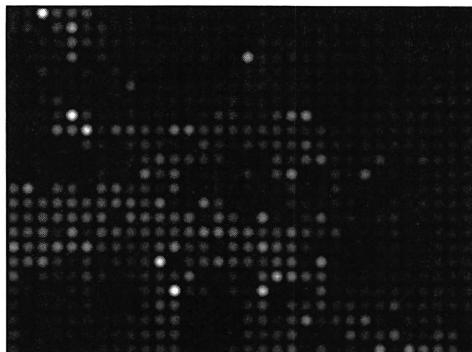
What's fixed?

A few niggling bugs have been fixed. For example, ADPro didn't save interlaced pictures properly in earlier versions; now, astoundingly, it correctly sets the interlace flag so that other programs don't

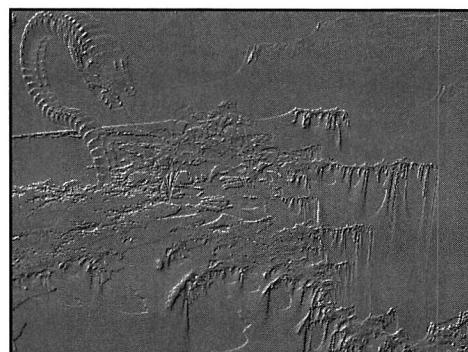
Mosaic



Pattern



Emboss



load them as vertically stretched medium resolution images. Unfortunately, ADPro's modular design means that the new version won't help you at all if you're stuck with a lousy third party loader or saver that doesn't behave as advertised. Such is life.

There aren't many things I really dislike about ADPro 2.5. The program is still not perfectly stable, and can crash in entertaining ways even when you're just using the built in operators - not even fooling with FRED. One sporadic problem I get is a sudden conviction on ADPro's part that when I load a 256 colour image it's not really there, bringing up the "there's no 8 bit data ..." requester when I try to use an operator. Quitting and restarting doesn't solve the problem; nothing but a reboot will do.

Occasionally the loaders and savers simply spit the dummy for no reason at all, popping up a suspend/reboot requester; it doesn't happen often enough for it to be classed as a major problem, though, and

ADPro crashes seldom hang the computer completely, so you can tidy up your other business in safety.

ADPro's memory use isn't dreadfully intelligent, either. By default, it looks at your system, sees how much fast RAM you've got in one chunk and gloms the lot, less 128k. This is rather alarming.

You can set a ceiling value for the memory ADPro uses, but there's no way to configure the program so it leaves a certain amount - start ADPro with the same other things running or suffer the consequences of an accelerated machine running out of chip RAM and grinding to a shuddering halt. You can set the ceiling low to avoid this, but then you're headed for the annoyance of a strangulated workspace and out of memory messages.

If you're running a 1Mb machine, forget ADPro. It's like putting a hippo on a BMX bike. With 4Mb or more you can start using it, it's fairly happy on my 9Mb system, and ideally you should have well over 10Mb and a virtual memory pro-

gram like GigaMem to take up the slack. Likewise, this is not a product for 68000-based machines; do a nice complicated routine like a Collapse on a big picture and your computer will be in la-la land for an hour or more.

A1200 owners can barely make it with an O20 system with fast RAM, O30 owners are OK (particularly if they've got a math coprocessor, which ADPro can address), and the 68040 is ADPro's native habitat.

So if you've got the kind of Amiga that frightens small children and have \$298 to spare, ADPro is a worthy investment. It's not for the amateur, not for the tinkerer, certainly not for the meek - but if you want super powerful image and animation processing in a reasonably stable package that is now tolerably easy to use, ADPro's for you. We certainly couldn't do without it at ACAR.

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Four Corners

Barry Sutton spotted the distinctive tones of the Amiga's voice synthesiser on Monday, May 2nd's edition of Four Corners on Channel 2. In a story on fraud in the Department of Employment, Education and Training, one of the whistleblowers used a computerised voice rather than give away his identity, and the machine he chose was obviously the Amiga.

The Movies

Lachlan Madsen of Mount Gravatt, Qld, pointed out that Amiga graphics were used for on-screen computer and security monitor effects in the mindlessly violent movie *Fortress*. He's also been keeping an eye on the alternative cinema up North, and has spotted three low budget 16mm sci-fi movies with computer graphics added. One, sponsored by a broadcast video production house, had a high powered text titler for its on screen effects and looked a bit simple and stilted, possibly because of limited time to use the complex equipment.

The second film was created with PC based 2D and 3D software at a Brisbane tertiary college, and looked quite good but a bit amateurish.

But the last movie was packed with great colourful graphics, built in *Deluxe Paint* and apparently sequenced with SCALA. Lachlan points out that the Amiga seems far more flexible, with a lot more bang per buck, and wonders why it hasn't been as readily accepted into the broadcast arena in Australia. Well, the absence of a PAL Video Toaster or similar device is part of it, but even a "nude" Amiga can do some very snazzy stuff, and the new Opal video processing boards promise to turn it all around.

Big Byte

Monte Boyd (yep, him again) has come up with a few more spottings on SBS's computer program *The Big Byte*. In a story on cyberpunks, an Amiga featured in a software piracy showroom, running *Quarterback Tools*, and subsequently MED. The second cyberpunk they inter-

viewed was using an Amiga with the top casing removed, running Workbench 2 or 3. The third interviewee used to produce an Amiga magazine, but no further details were forthcoming. But the final and most notable spotting was of this very magazine, on the desk of the game reviewer - who, Monte points out, goes to the same school (Mosman High) as him and is one of his friends. In the opinion of the ACAR editorial office, this isn't a fact you should make widely known, Monte.

Mosman High uses two A2000s in the art department and an A500 in the staff room for games - and in Monte's first week of work experience (his last spotting was from his second...) he went to a place called Catflap Animation, which is using an Amiga with Video Toaster - presumably the 4000 Toaster. We'd give you a free subscription, Monte, but we already have!

Wayne's World

Colin Tucker spotted *The Big Byte* appearances too, and also mentioned that Dana Carvey (Garth from *Wayne's World*) wears a Video Toaster T-shirt on *Wayne's World 2*, which could have something to do with his brother being on the original Toaster development team. A small world indeed! Colin gets a round of applause for instructing us to live long and prosper in his signoff, too.

Beyond 2000

Greg Buresch spotted the *Beyond 2000* Amigas, but also saw an A1000 on a repeat of a 1988 show; the 1000 was displaying some educational software. Worth a mention, if only to honour Greg for staying up until five in the morning.

Science Magazine

Rhys Allen has torn himself away from *Wonder World* long enough to send us a photocopy from *Australasian Science*, Autumn 1994. The article's about the cyberpunk phenomenon, and there are accompanying pictures of an A3000 and CD32. Rhys thought the CD32's monitor was an old Phillips, but Daniel Rutter instantly identified it as a very old model 1084 in rather better repair than the one he uses as a TV at home! □

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Close up: The FUTURE with AAA

by Andrew Farrell

Only Amiga makes it possible - the slogan that captured the spirit of Amiga. And how true it is.

So many things the Amiga does are only possible, thanks to an impressive array of custom chips unique to our computer - and the next generation AAA versions sound even better.

These AAA chips take much of the workload from the CPU in the areas of graphics, sound and input/output. People who have never used an Amiga often try to compare it to other machines according to the processor speed. Nothing could be more misleading - indeed, with the new AAA hardware expected soon, such comparisons will be pointless.

Dave Haynie, the senior engineer at Commodore responsible for system design of the next generation Amigas, has said a AAA prototype is up and running. According to Haynie, "The AAA chip set is a radical departure from anything you have seen before. Everything in it was designed new, from the ground up."

AAA consists of four custom CMOS chips, with a total of approximately one

million transistors. It's a totally new design, not an upgrade from AGA, thus it has none of the limitations of AGA. The four chips are called Andrea, Monica, Linda and Mary.

They are all full 32 bit chips, with the "exception" of Linda and Monica which also have 64 bit modes. They are not limited by the 14Mhz clock of AGA, or the hardware-fixed DMA slots (see the hardware reference manual).

Shunting data

One of the issues often discussed by the hardware techno-junkies is bandwidth - how much information can you move around the system at one time? This is important for multimedia, and absolutely critical for non-linear digital video editing.

At a recent conference, Haynie talked in terms of an aggregate bandwidth of 400-600MB/s in a basic next generation machine. By comparison, the current AGA machines have a total bandwidth of just 14MB/s.

Part of this bandwidth is taken up by DMA - channels along which information can flow between parts of the computer and memory. On the new AAA machines, DMA is used for everything, from the blitter and copper, to sprites, the audio

voices, video display, floppy disk I/O and serial ports.

Indeed, the 40 DMA channels at the heart of AAA will be the very thing that continues to set the Amiga apart from other computers. The operating system is fully capable of taking advantage of DMA and hardware coprocessing, due to its multitasking nature. When one task is waiting for some DMA or other hardware processing to finish, another task can switch on and use the processor.

DMA grunt

The blitter is basically just some DMA channels that feed graphic data into a processor and then write it back out to RAM. The blitter can easily do all the necessary memory crunching required to move images around a screen - independent of the CPU. According to Haynie, the AAA blitter can move 24 bit images significantly faster than AGA can shift 8 bit images.

Current technology is so slow you usually see 24-bit graphics being redrawn as they're pasted down, and refresh of the image whilst it is being dragged around normally results in strange visual sloshing effects. This will not be a problem under AAA. The new Amiga will move 24-bit graphics around in an instant.

The point is, AAA is revolutionary. It is not simply a catch up move, or another evolution in Amiga hardware. If Commodore (or whoever owns the technology in the future) can deliver, AAA will be as astounding as the Amiga was when it was first launched in 1985.

CD quality sound

Another hallmark trait of the Amiga is its built in sound ability. Most computers do not have good built in sound (the exceptions being the Apple IIgs and the Atari Falcon, both of which failed despite being decent machines) - most even have none as standard.

The Amiga's old four voice, 8 bit sound has been quite sufficient for a number of years and remains better than average for a PC. But AAA takes this to new levels: it now has 8 independent voices, each with 16 bit accuracy, and 64Khz sampling rates (compared to 30Khz for AGA).

That puts each channel well beyond a

CD player in technical accuracy, and far beyond what the human ear can hear. It's also far beyond typical sound boards on other computers. Amiga sound samples are fed by DMA channels, thus relieving the CPU from 99% of the work normally involved.

Beefed up video

Utilising 32/64 bit DRAM and VRAM, and high speed burst access, AAA increases bandwidth over AGA by 20 times! First of all, AAA just simply runs faster, due to its high speed CMOS chip design. Everything is at least 32 bits, further increasing bandwidth. Memory can now be accessed in "burst mode", which allows you to read four successive locations in memory very quickly. And finally, VRAM!

What's VRAM? It stands for "Video RAM". In order to get the high transfer rates (bandwidth) required for hi-res displays, VRAM was invented. It has two

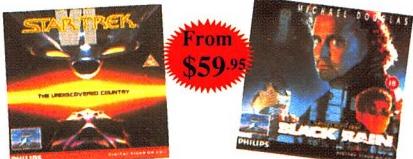
"ports" (and is hence also called "dual ported" RAM), one exclusively for video and one for accessing and changing the bitmaps. That effectively doubles the speed.

With VRAM, there will be no more video contention. Ever noticed how slow your Amiga gets when you open up the largest, most colourful screen (640 x 400 x 16c for ECS or 640 x 400 x 256c for AGA)? That's because those modes need so much bandwidth, that there is almost none left for the CPU and blitter to use.

In the AAA chipset, using VRAM, this won't be a problem anymore! The video DMA only uses one of the ports on the VRAM (in fact, this port is designed specifically for video, and the VRAM has a built in shift register for this purpose). You can open the largest most colourful screen you can, and the blitter and copper won't slow down! Of course, they'll have more graphics to chew on ...

You can also use normal everyday DRAM, which will be slower, but cheaper.

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Welcome back to good "old fashioned" courteous service!

VRAM costs about twice as much. Luckily, you can combine both! VRAM is good just for the display, DRAM is good for everything else. So as long as you have enough VRAM to open your screens, you're okay. This flexibility is a great advantage. You can have up to 16MB divided between DRAM and VRAM.

So, what kind of resolutions are we talking about? The maximum resolution, non-interlaced, should be around 1280 x 1024 (at 8 or 16 bits). That's quite a far cry from 640 x 480 x 8 in AGA. It should be able to do 1024 x 768 x 24 bits as well. And it'll be FAST in these modes.

We'll also have our choice of chunky (PC style) or bitplane (Amiga) modes. Chunky will be 2, 4, 8 or 16 bits. Bitplane mode will allow up to 16 planes. The types can be combined. For a 24 bit mode, for instance, you would have three bitplanes, each of which is an 8 bit chunky bitmap.

There is also some kind of new compressed display mode (in addition to HAM which is also technically compressed). Of course, there's HAM and HAM8, which at a resolution of 1280 x 1024 will be very nice, and there is likely to be a HAM10 mode, giving 24 bit graphics with only 10 bits per pixel.

Under control

As if that weren't enough, AAA does still more. It has serial ports, floppy drive support, and input device ports. The two joystick/mouse ports can support a wide range of devices, including standard joysticks, mechanical and optical mice, analog joysticks, lightpens, and drawing tablets.

AAA also has two high speed buffered serial ports. The old single port on AGA can handle as much as 115.2 K Baud, but requiring significant CPU overhead to prevent loosing characters. AAA uses a FIFO buffer and DMA to remove the overhead and danger of dropouts at high speeds. This will come as great news to those planning on keeping up with modem technology!

Finally, the floppy port. One of the most annoying things that has not been upgraded, until now. While AGA requires a special, half speed drive to support HD

floppies, AAA is so fast they don't even make a floppy that can keep up! It easily supports the Quad Density drives that are still not commonplace (High Density being the standard now). And with AmigaOS formatting, that means 3.52MB on a disk!

The floppy support can handle the transfer rates of a CD-ROM or slow HD, which is far in excess of current floppy drives. So if they ever make an "Octa Density" floppy drive, AAA will be ready for it. It could also handle a 20MB floptical drive, if there was a non-SCSI version available.

Digital signal processor

Though it's not part of the Amiga custom chip set, the digital signal processor fits right in. A DSP is a natural companion to the AAA chip set. A DSP isn't limited just to sound, although it can be of great use for creating music and sound effects. But it can also be used for things like high-speed modem emulation (indeed,

"AAA will be as astounding as the Amiga was when it was first launched"

high speed modems have DSPs in them), speech synthesis, JPEG/MPEG image compression/decompression, data acquisition and processing, speech recognition, graphics and image processing, and more.

The Amiga DSP has a multitasking OS of its own. This allows the DSP to do many things at once, so you are not limited to just doing sound or modem emulation.

Commodore has selected the AT&T 3210 DSP. This is full 32 bit, floating point processor (unlike the limited 24 bit fixed point processor used in Atari's Falcon). It has an 8K on-chip memory cache and 33MFlops of computing power, and shares the system bus with the Amiga's CPU, giving it access to all memory and resources. Finally, there's a high speed serial I/O port with DMA, capable of 24Mbit/sec transfers.

The next operating system

The Amiga operating system has been maturing for almost nine years now. It now has most of the basic tools needed for multimedia out of the box.

- Pre-emptive multitasking. A great help, especially in a hardware-oriented machine like the Amiga.

- Advanced interprocess communication - adopting ARexx was a great move. Any application can communicate with another, control it, or offer services to other apps. This communication can even exist across a network (see "Envoy", Commodore's networking software).

- Object oriented GUI - while not yet being fully taken advantage of, this is a great thing for the future. An important offspring of this, Datatypes, plays an important role in multimedia. Datatypes allow applications to support multiple file formats without any extra work. Since Datatypes are objects, they can be embedded into windows, or even each other. The full power of Datatypes has yet to be realised.

Currently, Datatypes cover the basic multimedia data forms: Pictures, Sounds, Animation and Hypertext. Support for specific file formats include the standard IFF formats, including ILBM (images), ANIM and CDXL (animation), 8SVX (sound); Amigaguide (hypertext), ASCII text. Third party (public domain) datatypes cover GIF's, JPEG and other forms.

- Multitasking GUI - the AmigaOS GUI is designed with multitasking in mind. It does not have such unfriendly things like "modal dialogs" and other "features" found in other lesser systems.

- Fully 32 bit from the beginning - all Amiga apps are 32 bit. There is no baggage from 8 bit OS's.

- Extendable design - anyone can add new function libraries, or devices.

- Shared code libraries/devices.

The next machine

What good would AAA be, if it doesn't have a nice computer around it? The A5000 (working title) is going to be a perfect match for AAA. Like AAA, it will be a totally new design.

- Processor independent, high speed 64 bit local bus. So you aren't locked into the 040 or 060. When you are ready, go RISC, with no bottlenecks.

This is probably one of the most important aspects of the new system. With this as the backbone of the system, everything else will fly. It gives massive bandwidth to the entire system, and a high degree of modularity.

- PCI slots. A future industry standard. Why go with this? Isn't this anti Amiga? Well, why not. PCI is good. It's fast, it's standard, it's perfect. The Amiga will still have Zorro III slots, too.

- 64 bit memory. While the 68040 and 68060 are only 32 bit processors, having 64 bit memory will speed things up. It's also handy for when you can add a 64 bit RISC processor.

- Motorola '040 and '060 CPUs. The 40Mhz 040, and the upcoming 60Mhz 060 are still formidable processors. They can hold their own against the Pentium (PowerPC doesn't count, yet).

- High speed SCSI-II on the motherboard, connected to the 64 bit local bus.

- DSP - as if the AAA chipset isn't powerful enough, you'll have a DSP to play with too!

Is it worth while?

One of the best things about the Amiga 5000 will be the level of integration of the system. All the parts will cooperate smoothly, complementing each other, and giving the system an overall feel and power that is greater than the sum of its parts.

Look at the A5000 and look at what the competition will have then. Sure, there may be individual areas where other machines will beat it. IBM clones will still be cheaper. But, as an overall system, the A5000 will win for many applications.

The A5000 will have very respectable graphics. It will have an operating system well suited to the hardware and applications that can already take advantage of the technology.

The A5000 system is built right, from the ground up. With a high speed 64 bit local bus at its core, a fast 32 bit CPU, a fast 32/64 bit custom highly integrated

multipurpose chip set, SCSI-II, DSP, and PCI slots - it's a formidable system.

And running on this hardware, you have an OS that already knows how to use all this power. A very fast, multitasking kernel. All the basic multimedia extensions, built in. The Amiga, and especially the A5000 (or whatever they call it), is a perfect multimedia system. It can go full blast doing sound, graphics, communications, number crunching, multitasking, disk I/O, networking - all at once with ease.

There are too many stories about Macs that just barf when trying to multitask

"One of the best things about the Amiga 5000 will be the level of integration of the system"

with serial or network transfers going on, slow animation, mega expensive video hardware and software, and just plain being slow no matter what you're doing.

The A5000 or AAA is not too little, too late. Sure, Commodore could have created this machine two years ago (which would have been mind blowing), but that's the way it goes.

Let's take a look at what you'd need to approximate the AAA chipset and the A5000, if you have an IBM clone:

- Modern motherboard.

- 64 bit local bus (CPU to DRAM).

- Full PCI slots.

- EISA or ISA or something for backwards compatibility.

- Sockets for plenty of 64 bit SIMM's (well, pairs of 32 bit SIMMs).

- SVGA card PCI based, or built into motherboard.

- 64 bit high speed bus interface.

- 32 bit fast blitter.

- co-processor (completely independent instruction list, can control ALL aspects of the system — sound, video, blitter, sprites, etc).

Sprites

Bitplane (1 - 16), chunky (2, 4, 8, 16) and hybrid modes (8 x 8 x 8).

VRAM, DRAM, in varying combinations.

Up to 16MB VRAM/DRAM.

Compressed video modes.

- Sound card.

- 8 voices, 16 bits each, 64Khz sampling.

Separate volume and balance registers. DMA fed.

- Serial port card.

- 2 high speed serial ports. FIFO buffers and DMA.

- Game port/mouse port/floppy/CD-ROM card

Two ports, which support mice, joystick, lightpen, drawing tablets.

- Floppy port:

- Supports Quad Density disks.

Is fast enough to support CD-ROMs or other devices in this speed range (flopticals, etc).

- SCSI-II card

- PCI card or on motherboard. High speed SCSI-II FAST (10MB/sec). DMA driven.

- Powerful OS

- Pre-emptive multitasking. Object oriented GUI. Datatypes. Interprocess communication. System script language (Rexx?). Etc. (this narrows it down to OS/2).

- DSP card

- PCI card or on motherboard. 32 bit floating point DSP. 33MFlops computing power. 8K cache. Access to system memory.

All that adds up to a lot of money in today's terms, meaning the Amiga 5000 will be in the running. With the added likelihood the machine will run other operating systems more easily in the future, the Amiga stands to enjoy main stream attention at last. Stay tuned! □

DirWork 2.0

The fully configurable directory utility

by Daniel Rutter

A directory utility is a program that acts like a cross between the shell and the Workbench. You can do most things just by pointing and clicking, but there are all sorts of nifty built in features like automatically displaying pictures and playing sounds, making and extracting archives without stuffing about with complex command lines, and all kinds of other built in gadgets.

For many people, the directory utility is their interface of choice - almost as intuitive as icons, almost as powerful as the shell.

The big - in every sense - directory utility for the Amiga is *Directory Opus* (*Opus* to its friends), created in Australia by Jon Potter and sold around the world - it's now handled by an American company. *Opus* does just about everything and is highly configurable so you can make your personal copy completely incomprehensible to anyone else.

The main trouble with *Directory Opus* is size. The program itself is getting on for 250 kilobytes, and with all of its support files you're looking at more than 500k. For users of big machines this isn't a problem, but nobody will ever be able to get *Opus* running on a 512k or even 1Mb machine without eating so much RAM that you can't do much more than admire the screen.

Opus is also not free of bugs. There's nothing crippling in there, but it gets con-

fused about its buffered directories from time to time and when you make archives it can sometimes go berserk and try to do everything in a directory instead of the files you highlighted. Stuff like that.

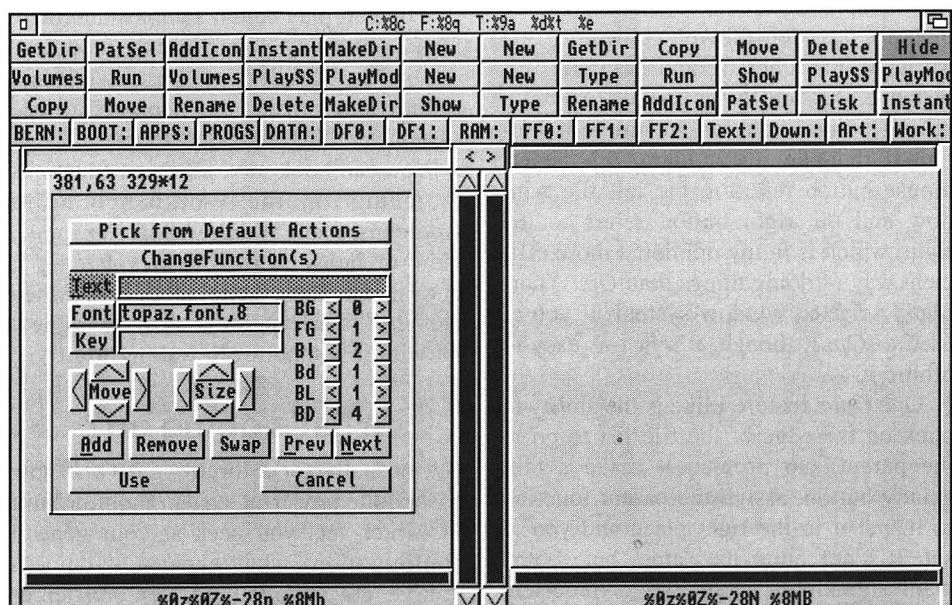
The solution

Enter *DirWork*, which is produced by Chris Hames, another Australian author who's also responsible for the very popular *PC-Task* software IBM emulator.

DirWork was originally a shareware

directory utility, with many of the features of *Opus* in a considerably smaller package. The trade-off was that *DirWork*, while very configurable, was not particularly user friendly about it, and making more than small adjustments required considerably more manual bashing than doing the same thing in *Opus*. *DirWork* also had bugs, about as annoying as those in *Opus*.

Now there's *DirWork 2*. *DirWork* is now a commercial product, with all sorts of hip new stuff added, but it's still only



about 100k in size and so runs fine on even a 512k machine.

Utterly configurable!

DirWork is now absolutely ridiculously configurable - you can have DirWork open as an inch square window on Workbench with four buttons and no file display, or you can have a 1280 x 512 screen open with a couple of hundred buttons, each one of which has different functions depending on which combination of mouse buttons (up to three) you're using along with any number at all of qualifier keys. That's right, this means you can have literally thousands of functions all available at once.

You can, quite literally, start from a blank screen and add file lists, scrollers, buttons and gadgets from scratch if you want to - but a far less strenuous tactic is to take one of the pre-built configurations and customise it. The configuration editor, as I'll explain later, is far better suited to tweaking an existing config than creating a new one.

Speaking of configs, lots are included. Many users will just be able to take one of the built in configs, maybe twiddle it a weeny bit, and be happy as Larry without ever touching the other built in features.

How many built in features are available? Glad you asked.

Here we go!

Naturally, DirWork has all the usual file manipulation features, although some bits of *Opus* aren't there. You can't copy a file by just clicking and dragging, for instance. But, and this is one of DirWork's selling points, you can set up your buttons so that clicking on them with the left mouse button refers to the left file window and the right button refers to the right, which is in my opinion a more efficient way of doing things than *Opus'* currently selected window system. If you're used to *Opus*, though, it's just as easy to mimic it.

One *Opus* feature I like is the ability to click on the edge of the file list to go to the parent. No problem - make a tall, skinny button, assign the parent function to it, put it in the right place and you're set. It's not quite the same, but if you want something which works precisely

the same as *Opus*, just buy *Opus*.

There's a built in text viewer which supports ANSI colour and hex display, and also PowerPacked files if the powerpacker.library is installed. The built in picture viewer shows icons and IFF pictures with auto-scrolling, and also shows PowerPacked files. You can pop up a display mode requester while viewing to change screenmode at will if, for example, a picture's been saved in the wrong resolution.

If you've got AmigaDOS 3.0 or higher, you can use Datatypes and can thus load any image format you've got a Datatype for; on earlier versions of the operating system it's not very hard to hook up an instant action so that any picture format gets shown by an appropriate viewer when double-clicked.

***You can have
thousands of
functions all
available at once"***

The icon view, though, doesn't have the nice features of *Opus*; it doesn't mimic the Workbench Info command, so all you can do is look at the icon, not change its default tool, colours and so on.

You can play sound samples and, new for v2, also play SoundTracker modules.

DirWork 2 will copy, format, test and install floppy disks, and supports all file systems and high density floppies.

You can hook any, all or no functions to menus on the Workbench or to AppIcons, icons which will, for example, view or delete a file when you drag it onto them. These hang about even when DirWork is asleep, so you can do quite a lot with it without even waking it up.

What's going on?

Unusually for a dirutil, DirWork now has a quite powerful system monitor built in, which lets you peek at your general configuration, what expansion devices you've got installed, resident resources

like fonts, ports, libraries and devices, tasks, screens and windows, DOS devices, memory, interrupts, available video modes, and all system tooltype and file calls (like SnoopDOS and IconTrace rolled into one).

There are some limitations to the system information features; you can't, for example, have a continuous dump of all system activity to a file, which you can do with SnoopDOS using the -z option. But you can print any of the system information screens.

DirWork also doesn't do system speed tests. This omission has not, as yet, destroyed my life, but one thing I would like to see is a SnoopDOS-like display of the processes that are looking for files, not just which files are being hunted.

Vicious ARexx

DirWork has ARexx support, but it's about as friendly as a Martian war fleet. You send the program raw configuration strings, which look like this:

"A,p",z'v464F524Dm8v414E494D',t'
FORM???? ANIM'@0,s1".

If you're going to be a DirWork 2 power user, you'd better get used to this, because tweaking the configuration file directly is the only way to make global changes. The configuration editor is powerful, but you can only change one button or action at a time. For example, if you want DirWork to open on a full overscan med-res screen, you have to set this option separately in the startup section and for the wake-up hotkey, not to mention any other connection you want to use to pop DirWork up from its sleep mode, like an AppIcon or menu entry.

The config strings are well documented in the more than adequate ring-bound manual (an index would be nice ...), but if you're not an accomplished Amiga user my advice is stay well clear.

While I'm complaining about the config editor, it could do with better mouse control so you could plonk buttons, roughly in place with the mouse instead of stepping there with keys. Group selection would be nice, too, so you're not going select-size-move-select-size-move

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to rearrange large numbers of buttons. A tile feature would be brilliant.

The palette requester is not the best either; I'm assured a better one (maybe even with numbers to tell you what colour you've got!) will shortly be included.

Screens

DirWork can open as any flavour of screen or window you want. Colours, size, resolution, screen flags, public screens, the works. I won't list the options; it can do everything. Clear? You can also set all the regular screen gadgets to be any size or place you like - if you want the close box in the middle, put it there.

Further cool additions relate to the creation of new commands. You can make any command that takes time abortable; holding both mouse buttons will cause *DirWork* to stop any internal operation and try to stop external programs, though they may not listen. You can also tie file requesters to any command, with the out-

put from the requester fed to any function you like.

Old machine - no worries!

One of the more unusual points about *DirWork 2* is that it runs fine on Workbench 1.3 machines - even 1.2! Some features don't work any more - scrolling pictures, AppIcons, tool menu additions - but in general the program behaves the same. There are some tradeoffs associated with this; if you're going to be running in WB1.x you can't use WB2 cycle gadgets, so Chris rolled his own that look the same and work the same unless you're using something like CycleToMenu, which turns proper cycle gadgets into menus but doesn't work on *DirWork*'s flavour.

In a similar vein, *DirWork* doesn't use "real" buttons, because standard Intuition gadgets can only react to the left mouse button, leaving the possible other two out. This can cause slightly odd behaviour, but in general works fine (*Opus* does the same thing).

Extra bits

There were a few things I would have liked to have seen with my review copy - more configs including ones to mimic *DirWork 1.62*, and a config converter so 1.62 users wouldn't have to laboriously convert everything by hand. The week after I got my review copy, these things appeared, and should now be either in the box you buy or available from Quasar for the asking. There's also supposed to be an *Opus* clone config in the pipeline.

The config convertor works on DW1.62 configuration files, or on 1.62 executables with config info built in. It doesn't convert absolutely everything, but it's very close and vastly reduces the clowning around necessary to get up and running.

On the subject of clowns, let me mention that danged Mr Clown config you've probably seen in the screen shots, illustrating the preposterous degree of configurability *DirWork 2* offers. Mr Clown does exist and it's one of the example configs, but it thankfully does nothing but list directories. It's good to know

that Chris had better things to do than make the clown useful.

Problems

I've only been able to squeeze two genuine bugs out of *DirWork*, plus one that's probably my fault.

One, it occasionally glitches the file list when entering empty directories (just minor garbage - nothing crashes).

Two, you can copy a directory into itself, causing the Amiga to do a Klein bottle sort of thing to its file system and possibly hang.

And three, on my system the picture viewer dies if you display a sequence of big pictures, and it takes the whole system with it. I've not seen this problem on anyone else's machine, so I reckon it's just some oddity of my hot-rodded setup.

Conclusion

DirWork can now be used for just about anything. Since you can have as many or as few of the huge list of possible features as you like, you can set it up as a front end for *Art Department Professional* that talks to it via ARexx, a dock like ToolManager only without the icons, a simple file manipulator or plenty of other things.

There's still room for improvement - a better config editor, the ability to use archives as directories like IBM dirutils (which are, generally, far inferior to even DW1.62), maybe an improved manual with more help for beginners. Indeed, if you're no wizard then configuring *DirWork* will require considerable application of logic and poring over the manual.

But rest assured, it's worth it. It may take a while to get used to *DirWork 2*'s configuration system (call the help line - that's what it's for!), but it's lovely once you're in. Higher tech users will be pleased to know that Galaxy BBS on (03) 584 8590 is the official Quasar support board for *DirWork* and *PC-Task*, and contains every *DirWork* extra you could hope to grab.

DirWork is available from all good Amiga retailers, and is distributed by Quasar Distribution, PO Box 188, Southland 3192. Phone (03) 583 8806. It retails for \$85. □

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Amiga picture viewers

by Osma Ahvenlampi

**Are you using the best picture viewer?
There's lots out there,
and not all are created equal.**

In this comparison, public domain, shareware, freeware and similar picture show program were compared. No commercial programs fall into the category of being exclusively for viewing

images. Some of the programs require the AGA chipset found on Amiga models A1200, A4000 and later. A few of the programs require a 68020 CPU or better.

The tests were carried out on an Amiga 1200, with a Microbotics 1230XA, 50MHz 68030 board, 2MB Chip RAM, 4MB Fast RAM, a 130MB hard drive, Kickstart version 39.106 and Workbench version 40.23.

The software included was limited to relatively simple programs meant purely for displaying pictures in various formats. Note that most, if not all, of these pro-

grams sacrifice quality for speed, unlike the dedicated converter programs such as *ImageFx* or *Art Department Professional*.

AGA modes were used where applicable, and if the program supported them. No extra ECS-specific tests were made. If a program had two versions, an AGA specific and an ECS specific, the AGA specific one was used.

Most programs in the review have a command line interface only, with perhaps the capability to read the options from icon tooltypes also. However, many can be configured to work with your favourite Dirutil such as *DirOpus* or *DirWork*.

All tests were made using the command line interface, except in the case of *ViewJpeg*, which had a GUI interface only (and a horrible file requester, something that was quite common in the AmigaDOS 1.3 days).

PRODUCTS TESTED

AIVE 1.0, by Laurent Vivier
 ALook 3.1, by Trevor Andrews
 Bview 1.06, by Joeri Alberty
 FastJPEG 1.10, by Christoph Feck
 FastView 2.01,
 by "KRUEMELMONSTER2000"
 GIF.datatype 39.3, by "Steve the G"
 GIF_view 4.4, by Lorenzo Musto
 HAMGIF 2.5, by Steven Bennett
 ILBM.datatype 40.2,
 by Commodore-Amiga, Inc.
 JPEG.datatype 39.1,
 by Steve Goddard
 Mostra 2.0, by Sebastiano Vigna
 MUGiff 1.4, by Mark Rose
 PPShow 4.0, by Nico Francois
 ShowGIF 1.01,
 by Christophe Passuello *
 ViewJpeg 1.0, beta by <unknown>
 Viewtek 1.05, by Thomas Krehbiel

VirtGIF 1.0, by Patrick Maloney
 VJPEG 0.01, by David Blevins
 ZGif 0.4, by Michael Zucchi
 ZGIF.datatype 39.7,
 by Michael Zucchi

* ShowGIF is the CLI counterpart of FastGIF, a better known, GUIdriven GIF viewer. ShowGIF is distributed with FastGIF.

Most of the software in this review, with the exception of ILBM.datatype (a part of the AmigaDOS from version 3.0 upwards) is available on Aminet, the world wide network of ftp sites for Amiga software, or from most public domain and shareware software distributors.

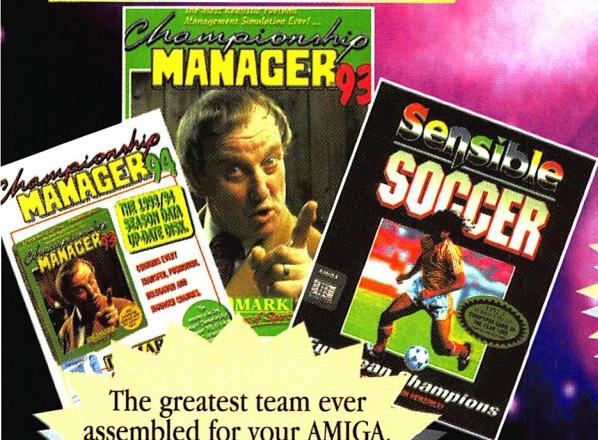
Testing method

Two pictures were used in the testing. For a colour picture, I decided to use a 597 x 796 x 24 scan of a Boris Vallejo painting. This picture was downscaled and converted with the NETPBM image conversion package to all the formats used in the test, with the exception of the HAM6 version, which was converted with HamLabPlus as a PCHG HAM (using 12 color registers in the slicing). For black and white, I used a 600 x 787 x 1 clip art collage GIF which I also converted to IFF.

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Speed

Timing was measured using the Spy System 3 system performance monitor package, and the CPUTime command. This program runs the program given to it as a command line argument, and after the program has finished, reports the real time and CPU time taken by the program.

In the following table I have listed the real time. While on first thought, CPU time might have been more truthful, it would have not included the time used to access the disk. Some of the programs use asynchronous file I/O, decompressing at the same time as reading from the disk, while others first read a bit, then decompress, read a bit more, etc. Given the same decompression routine, a program using asynchronous I/O can be significantly faster, although the CPU time taken would be the same. This is why real time is listed. See the end of this article for the listing of both real and CPU time.

The times are in seconds, and include all initializations and cleaning up the program made before and after displaying the picture. If the program wasn't capable of exiting immediately after displaying the picture, the number includes the time it took me to press the mouse button, ESCAPE, ENTER, or whatever the program required to exit. Datatypes were timed using Viewtek with the DT option.

It should be kept in mind that the times below are the results of one iteration only. That is, I tested the programs once. There might be random errors that repeated testing could have eliminated. This is especially true with the viewers that could not exit automatically, where my own reaction time might account for most of the time. The CPU time could be nearer to the truth in these cases.

Quality

My experience has been that on an ECS Amiga, FastJPEG produces by far the best result from a JPEG picture. In HAM8 mode on an AGA machine, the dithering is not that critical, and thus the difference in quality between FastJPEG and other JPEG viewers is less. FastJPEG also has a "dirty" option, which turns off dithering and speeds up the displaying considerably. With this option, the result-

TABLE OF FEATURES

Program	IFF	IFF24	PCHG	GIF	JPEG	Mode	DT	Multi	Slide	FReq	AGA
ALook	0	-	0	-	-	-	0	0	0	0	-
Bview	0	-	-	-	-	-	-	-	0	0	
FastJPEG	-	-	-	-	0	0	-	0	0	0	*
FastView	0	-	-	-	-	-	0	-	0	-	
GIF.dt	-	-	-	0	-	NA	NA	NA	NA	NA	0
GIF_view	-	-	-	0	-	-	-	-	-	-	
HAMGIF	-	-	-	0	-	-	-	0	0	-	
ILBM.dt	0	-	-	-	-	NA	NA	NA	NA	NA	0
JPEG.dt	-	-	-	-	0	NA	NA	NA	NA	NA	X
Mostra	0	-	0	-	-	0	-	0	0	0	0
MUGiff	0	-	-	-	-	-	-	0	-	0	
PPShow	0	0	0	0	0	0	0	0	0	0	0
ShowGIF	-	-	-	0	-	-	-	0	0	-	0
ViewJpeg	-	-	-	-	0	-	-	-	-	0	
Viewtek	0	0	0	0	0	0	0	0	0	0	0
VirtGIF	-	-	-	0	-	-	-	-	-	-	
VJPEG	-	-	-	-	0	-	-	-	-	-	
ZGif	-	-	-	0	-	-	-	0	-	-	*
ZGIF.dt	-	-	-	0	-	NA	NA	NA	NA	NA	X

Key:

- The program has this feature.
- The program does NOT have this feature.
- * A separate version of the program has this feature.
- X AGA is required to run this program.
- NA Not applicable. In particular, datatypes do not have a user interface of their own, but require a viewer that supports datatypes (such as MultiView) as a front-end.

Explanation of the columns:

- IFF, IFF24, GIF and JPEG are picture formats. PCHG is an extension of the IFF ILBM format with a multipalette chunk mostly usable for HAM pictures.
- DT means the program can use Datatypes to display pictures.
- Mode means support for manual screenmode selection from the Display Database.
- Multi means capability of showing multiple files on one invocation.
- Slide means basic slideshow support, such as looping through the pictures, showing a picture for a specified time, and hidden decompression while showing another picture.
- FReq means the pictures can be selected from a file requester.
- AGA means the program supports AGA modes.

Picture/Speed

<u>Program</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
ALook	-	-	3.2	-	1.8	-	1.6	-	-	-	-
Bview	-	-	-	7.4	2.7	-	2.6	-	-	-	-
FastJPEG	14.3	6.9	-	-	-	-	-	-	-	-	-
FastView	-	-	-	-	7.9	-	3.6	-	-	-	-
GIF.dt	-	-	-	-	-	-	-	3.1	4.7	4.5	-
GIF_view	-	-	-	-	-	-	-	14.3	17.9	19.1	-
HAMGIF	-	-	-	-	-	-	-	7.4	6.9	4.7	-
ILBM.dt	-	-	-	6.1	1.9	2.7	1.9	-	-	-	-
Mostra	-	-	2.7	5.8	1.4	2.2	1.2	-	-	-	-
MUGiff	-	-	-	-	5.0	-	2.4	-	-	-	-
PPShow	18.9	9.5	2.9	5.3	1.6	2.3	1.8	2.4	3.3	3.3	4.6
ShowGIF	-	-	-	-	-	-	-	5.9	4.1	3.3	-
ViewJpeg	57.9	24.1	-	-	-	-	-	-	-	-	-
Viewtek	40.4	10.6	3.6	7.6	1.9	3.0	1.9	3.3	4.6	5.6	19.8
VirtGIF	-	-	-	-	-	-	-	21.6	25.1	63.6	-
VJPEG	123.6	*	-	-	-	-	-	-	-	-	-
ZGif	-	-	-	-	-	-	-	4.7	2.3	X	-
ZGIF.dt	-	-	-	-	-	-	-	2.2	2.7	2.6	-

* VJPEG crashed on a grayscale JPEG.X. For some unknown reason, ZGif showed only a blank screen on the large black and white GIF.

JPEG.datatype crashed for some unknown reason on every try. Others have reported it working, but I was not able to get it work.

ALook	**+
Bview	**+
FastJPEG	*****
FastView	*
GIF.datatype	***+
GIF_view	*
HAMGIF	**+
ILBM.datatype	***
Mostra	***
MUGiff	*
PPShow	*****+
ShowGIF	***+
ViewJpeg	*
Viewtek	***+
VirtGIF	*
VJPEG	*
ZGif	***+
ZGIF.datatype	*****

Conclusions

PPShow was great all around. You will probably want a fast viewer that can display a lot of things with good to reasonable quality, and PPShow fits the description. The JPEG and IFF24 display quality leave room for improvement, but both are fast. In case you're willing to use several viewers, I would recommend using FastJPEG for JPEGs. It is a bit faster than PPShow, and a lot better quality. If you happen to be a speed freak, or use a slow machine, you might want to consider using the ZGIF.datatype with PPShow for GIF pictures.

Viewtek used to be the best all-around viewer available, and it still is quite nice. It has a lot of options, but suffers from number of bugs and chronic slowness. Personally, I'm surprised it is thought to be a fast viewer. □

Pic# Description

1	597x796x24 color JPEG
2	597x796x8 grayscale JPEG
3	298x796x6 lores/laced sliced (12) PCHG HAM6
4	597x796x8 hires/laced HAM8
5	299x398x4 16 color IFF
6	299x398x8 256 color IFF
7	600x768x1 B/W IFF
8	299x398x4 16 color GIF
9	299x398x8 256 color GIF
10	600x768x1 B/W GIF
11	299x398x24 IFF24

on ECS machines, HAM6 resolution is not that good.

Quirks

Viewtek can show 256 colour IFFs even on ECS Amigas. It will render them in HAM6 mode, and the result is identical to a 256 colour GIF. In addition, it shows HAM8 pictures on ECS machines, but seems to simply strip two bitplanes out, and not do any rendering to HAM6. The result is quite weird looking.

Gif_view, HAMGIF, VirtGIF and Viewtek show 256 colour GIFs in HAM6 on ECS machines. Other GIF-capable viewers show them in 16 grayscales. Viewtek and PPShow can also play ANIMs.

Wrap-up

In my opinion, the overall quality of a display viewer can be judged from three roughly equal parts: flexibility, speed and display quality. What follows is a quick assessment of the viewers in this test in the comp.sys.amiga.reviews micro-review format.

New Wb3.0 PCX Datatype

At the last moment, I decided to try Tron's PCX datatype (TPD.lha on Aminet) on a 256-colour conversion of the JPEG used in the above tests. It is significantly faster than the other PCX Datatype (PCX.lha on Aminet) I've seen. The times to display the picture were 8.6 seconds (TPD) and 12.4 seconds (PCX).

ing picture is very close to Viewtek quality.

PPShow has a problem when rendering 24-bit to HAM. While this is only a marginal problem on HAM8, it shows up extremely clearly on ECS machines and HAM6 mode. The result is hard to describe, but diagonal and vertical lines of high contrast are messy.

Some of the viewers convert 256 colour GIFs to HAM6. This is a two-sided matter. While this is the only practical way of displaying the pictures in colour

Neptun-Genlock

Desktop video just got better

by Andrew Farrell

Electronic Design have been quietly forging ahead producing Amiga genlocks for some years now. However, this latest model represents a significant leap forward.

The new Neptun-Genlock is a desktop Y/C unit, which looks smart, is easy to use and can be software controlled - which makes it ideal for use in multimedia presentations.

I tested the Neptun using the new Canon EX2-Hi camera, a Blaupunkt S-VHS VCR from AceEdit, and of course *Scala MM-300* with EE100 - the LANC video editing add on. I also found a good use for the MultiFaceCard III - a Zorro II compatible card which provides an additional parallel and two high speed serial ports from Pactronics.

The first serial port on my Amiga 3000 was used to control the camera (LANC) and deck (InfraRed) with a cable that is supplied with EE100. The second on the MultiFaceIII was connected to the Neptun-Genlock, and the third to the CDTV player. With this arrangement, an entire

edit could be sequenced using *Scala* with the EE100 EX modules.

The Neptun can remain connected to your Amiga when not in use. Power is drawn from the RGB connection, or by an optional separate power supply. At the rear of the unit you'll find single Y/C and

composite in and out connectors, RGB in and out, and a 9 pin style serial connector.

The entire unit is about a third as wide as your keyboard and only fractionally deeper. It sits at about the same angle. On top, there are two large sliders, which have a pleasant feel, and good travel. Next

The new Neptun-Genlock - about a third as wide as your keyboard



to these are three pots, which allow you to adjust colour (0-150%), contrast (20%-130%) and luminence (70%-130%) allowing some poorly shot footage to be easily corrected.

Across the bottom are eight membrane switches, six of which have LED indicators. Left to right they are power, RGB, invert, alpha, local, video fade, auto and computer fade. That should whet your interest!

"A jumper to compensate for problems when using the A3000 and a horizontal sync trim pot for fine tuning..."

Software

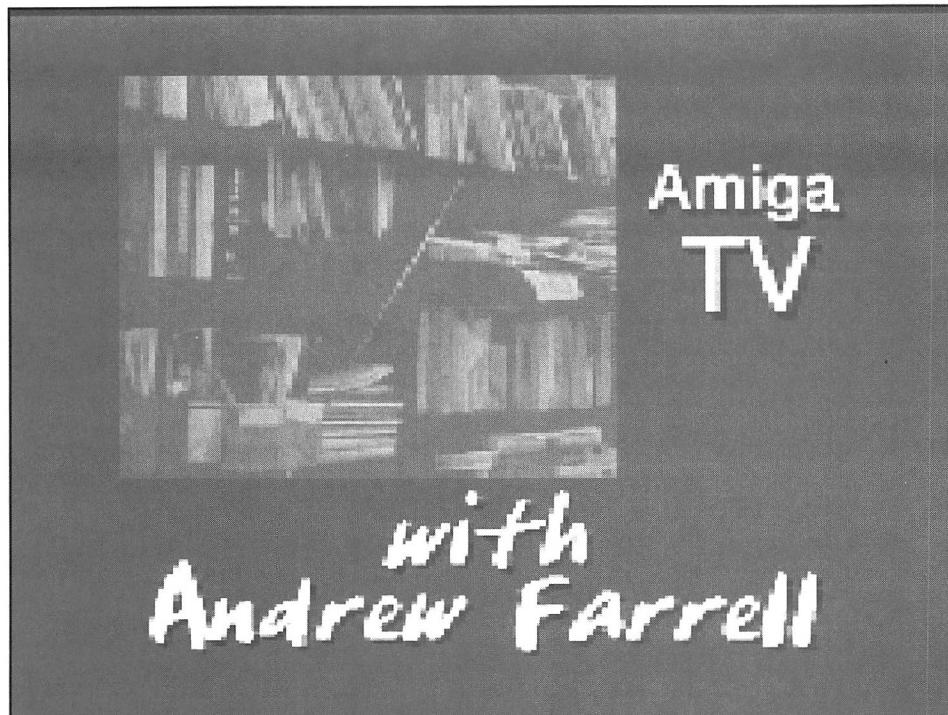
Two disks of software are included - a demo of *Scala 500* and the second, a Neptun-Genlock commodity installed using the standard Commodore installer. With the hot-key commodity running, and the local button deselected on the Genlock, your Amiga can serially control the Neptun using Alt-Shift-Key combinations. There's also a powerful AREXX port. Predefined action scripts are included and can easily be run from *Scala* using the Execute - Arexx option.

Internally, the genlock has a jumper to compensate for problems when using an Amiga 3000 and a horizontal sync trim pot for fine tuning the Neptun for studio use. You can easily access these adjustments by removing the side panel.

Auto faders

The Neptun features some smart auto-fade options allowing both manual and AREXX control of the fade facility of both the video and Amiga image.

When auto is selected on the genlock, and you're in local mode (no AREXX control) the two fade buttons go into play.



Neptun-Genlock's alpha channel allows colours to be defined as transparent by stepping the blue slider - every second setting is see-through revealing 50% of the underlaying video, like the square in this frame.

The slider function now changes to represent the fade time - this is marked on the unit. Now, when you press the fade button for either video or computer, that source will fade up or down in the time selected. This same facility can be operated using AREXX. The result is a simple one touch fade (or dissolve if you have the FrameMachine) - very nifty.

Alpha channel

You've probably seen graphics on television which appear to be transparent. This effect can be achieved in one of two ways. The first is to only partially fade up the Amiga graphic. Fine for some applications, but you cannot have any area which is at 100% - the whole image will be at partial strength. What you really need is the ability to define transparent areas. This is the job of the alpha function.

With alpha mode selected, every second slider setting when adjusting the RGB levels for a colour in any paint program will trigger alpha mode. In that setting the colour will be transparent. Actually,

you get exactly 50% Amiga and 50% of the original video. The result is you can easily have solid text over a transparent background.

Alpha mode can also be used to create true anti-aliasing around text - in fact it's the only way to do it when the text is being keyed over a video background through colour zero. Having the alpha channel is very handy and a welcome addition to such an affordable unit.

Wrap-up

First impressions on the quality side were good. We hope to get the Neptun onto a vectorscope by our next issue and check it out more thoroughly on some high-band equipment. Look for an update on the Neptun soon, in the mean time, it looks set to become the next standard in Y/C genlocks for the Amiga.

For more information check out the dealer list on Electronic Design's advertisement on our outside back cover. RRP is \$1283.50 including tax. □

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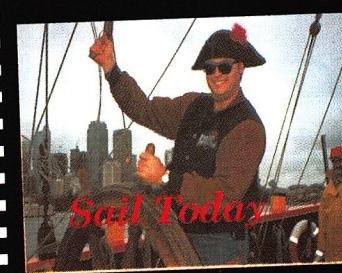
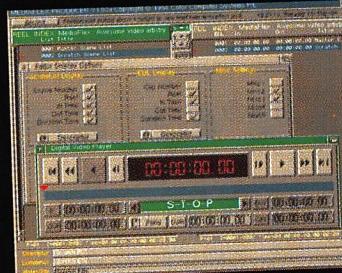
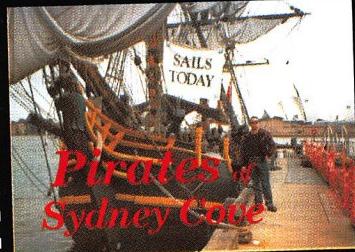
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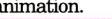
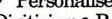
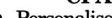
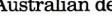
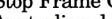
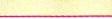
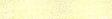
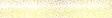
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Creating Forms using Professional Page

by Andrew Farrell

Gold Disk appear to be doing an exit stage left from the Amiga market. This is both good and bad. The price of *Professional Page* continues to tumble toward the \$100 mark - making it excellent value. That's good. The loss of what was once a leading software developer is bad. Of course, *Pagestream 3.0*'s arrival should be any day now, so it is probably no great loss in the long term.

One of my favourite applications for desktop publishing software is creating forms. In my own business, we use at least a dozen different forms, all of which were created using *Professional Page*.

There's a few neat tricks to creating a page of complex lines, columns and labels - not to mention getting things to line up without jiggering around inserting spaces in the text, or using align box to get things in place.

Step by step

Following is a step by step guide to creating your average form. Start *Professional Page* and go to the Preferences, Layout Tools menu. The short cut is Alt-T. From here you can alter various aspects of how your page is viewed - things such as columns, measuring units and outlines.

The feature we're interested in is Snap to Grid. It's not usually found in wordprocessors, and is one of the things that makes desktop publishing software especially powerful.

By turning on Snap to Grid, any boxes

you create will automatically snap or move to the nearest grid point as you size the box. This makes aligning a new box to existing boxes very simple. It also means it's easy to ensure boxes are a set distance from the page edge. Snap to Grid works when you move a box too.

An A4 page is 21 x 29.7 cm. So, a 1 cm grid will allow reasonably good control over the placement of boxes. The X and Y requesters next to the Snap to Grid button allow you to control the grid size.

The grid points do not have to form a square, and the grid does not have to be visible.

For forms, I use a 1 x 1 cm grid, with visible set on. Smaller grid settings will slow down *ProPage* considerably when refreshing on low magnification levels.

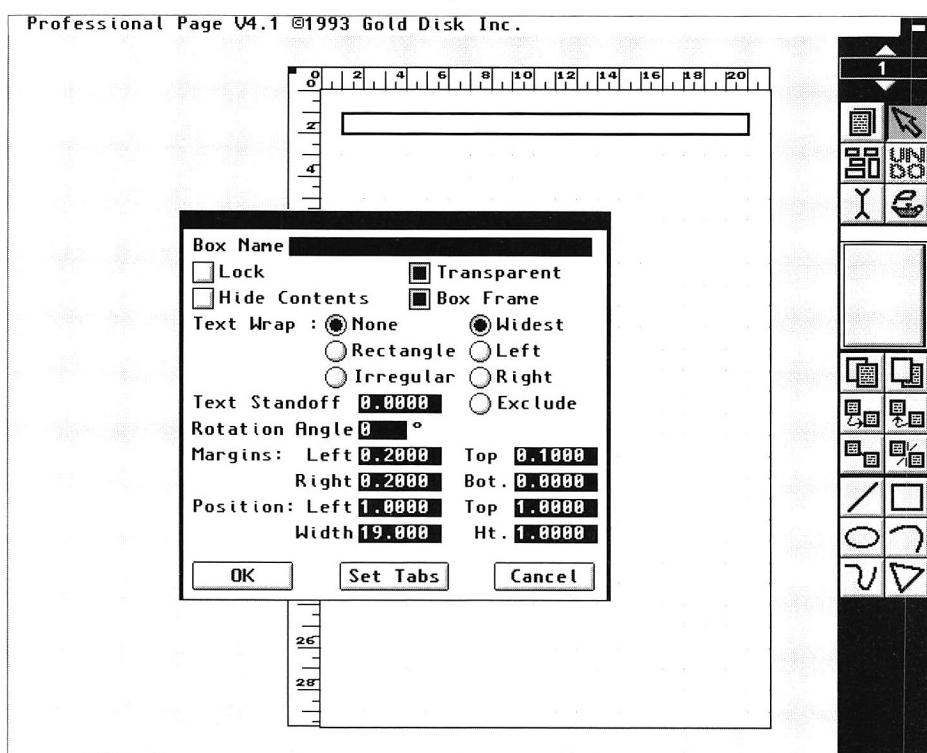
Choose outlines on, CMs for all measuring systems, grid on, and columns off. Click okay. Now, from the pull-down menus, choose page, create, from default and click okay. You'll notice a box at least partly visible on the page already. *ProPage* puts it there by default. Select the box, by clicking anywhere in it, and hit Shift-Del to remove it.

Now you're ready to go on. Set your magnification level to 50% from the preferences, magnification menu or select Right-Amiga 3.

Adding boxes

The next step is to create a single text box, and adjust the settings to suit the requirements of most of the text boxes on your form. Once you've done this, it's a simple matter to clone the box as many times as needed and then drag and drop

Figure 1



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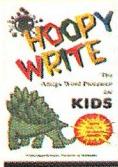
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and size each box as required. They will snap to grid instantly, ready for editing the text labels.

Once you've created one text box, double click anywhere in the box to bring up the alter-box-current window. From there you can alter the specifications of the box, including location, margins, frame, fill and so on.

For fast forms, it's easy to simply add a border to the text box, set the top, left and right box margins to one or more mm, and ensure the line weight is say one point or less. Careful when setting lines weights, as the hair line setting prints okay on a laser printer, but on a high resolution image setter is barely visible.

So, let's get started. Select the box tool, and drag out a box on your page, starting from the first visible grid point in the top left corner, and sizing to the right side of the page to form a long narrow strip 1 cm high. (See fig 1.)

Change to the pointer tool, double click in the box, and then we'll adjust the current box settings. While we're here, let's take a guide tour of this window, as it's one you will probably use more than any other.

Box-Alter-Active

The Box Name requester allows you to name the box. This is handy if you're using one of the Genies that needs to identify one box from many. Lock secures the box in place. You can't accidentally drag it, size it, delete it or alter any settings until Lock is switched off. This is ideal for creating page components that will appear on many pages in a newsletter. You can put things like the page numbers, key lines, heading boxes and so on in place and Lock them, so the person filling in the details will not move anything by mistake.

Hide Contents is primarily for boxes containing graphics. Sometimes a graphic will get in your way - maybe it takes too long to redraw or it's just too memory hungry. Hide Contents will replace the box contents with a big X - a sort of placemark. Now, there's a neat trick you can do here.

Say you want to change a picture, without having to re-import the changed im-

age - which could mean rescaling and cropping. Simply select Hide Contents, then select it on again. The updated image will be reloaded from disk, using the current crop and scale settings. Assuming the image is indeed the same size, the changes you made will now be accurately reflected on the image in *ProPage* you can see on screen.

Transparent is best left on. However, if you specifically want to hide something under a box, rather than using a solid white fill, you can simply select Transparent off.

Box Frame is one often misunderstood, and vastly under-used option. Many people resort to using the drawing tools for creating boxes. These are clumsy, impossible to resize and create additional unnecessary boxes if you need to place text within them. A single box, with Box Frame is the best solution. You can resize it, put text inside easily without turning your page into a jumble. Turn Box Frame on now for your form.

There are seven Text Wrap buttons, which I'll leave for now - along with the Text Standoff and Rotation Angle, as they all require a bit of explaining and some examples so you can see how they work.

Margins

There are four margin requesters. These margins work from the edge of the box, to the start of the text area. They can only be applied to an entire box, and TABS then start from the margin edge, not the box edge. If you use Box Frame and want to put text inside too, you'll need to step up the margin settings or the text will hit the box frame.

In figure 1. notice the margins have been set to Top .1, Left .2 and Right .2. Bottom is best left at 0 so the baseline of your text doesn't get so close *ProPage* decides the descenders won't fit and won't display the text. Alter your Margins to reflect these same settings. Be sure to

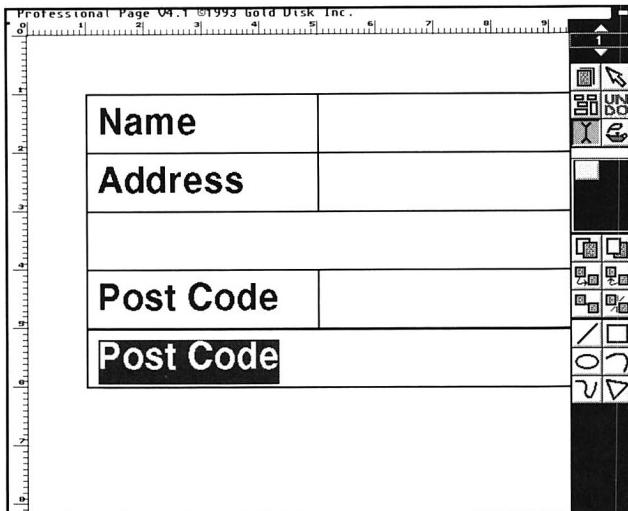


Figure 2

press return after making an entry, or *ProPage* won't accept it. You don't have to be at the end of the line to press return.

Okay, now you're ready to click OKAY, and enter some text. Change the magnification to 200% - hit Right-Amiga 1. Select the cursor tool and click once in the text box you create. Type in a label, such as Name. Now hit Shift-F4 to highlight all the text, and then Right-Amiga F to bring up the font requester. (There are pull-down menu equivalents of course, but it's really worth learning these often used short cut keys.)

Double click on a font, the requester will go away, but the text remains highlighted. Now hit Right-Amiga . - yes, that's the full stop key. You will now see the point size requester. Adjust the size as necessary and click okay. If everything looks fine, you're ready to start cloning. You may want to adjust the top margin setting to help centre the text in the box. I increased my margin to 2mm and made the text 18 point Triumvirate.

Bring on the clones

Now select the pointer tool, click once on the text box and hit Alt-K. A new box appears offset from the first. Simply drag it into position below the first and repeat this process again. Alter the text as desired, and then using the line tool add any vertical lines where required. (Figure 2.) The snap to grid function will make this a breeze. Your finished form is minutes away. □

An Introduction to Amiga Animation Software

A seasoned Imagine user, equally at home on Newtek's Lightwave software, Jarrod Pudsey started out playing games. However, he soon discovered a more interesting side to the Amiga. We managed to convince Jarrod to share his talents with us all in this new regular column on Amiga animation.

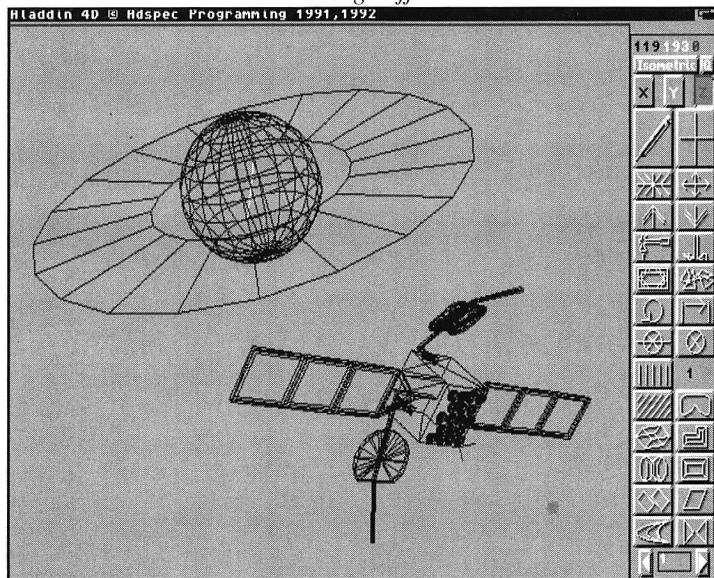
The Amiga has struggled to gain the recognition it deserves as a serious graphics computer outside of the USA. No doubt most of us have cringed at hearing the Amiga referred to as a games machine, putting it at the level of a Sega or Nintendo. True, the Amiga does play games, and quite a games machine it is.

I know there are a lot of users who only use it for entertainment - it's all I ever used to use it for. However, the Amiga's capabilities extend far beyond this. Even the humble CD32, marketed as a dedicated games console, has the ability to be a complete multimedia CD-ROM computer and Video CD player.

So, why is the Amiga labelled as a games machine? Well, the design of the computer, in particular the custom chips inside it, provide awesome graphics and sound - ideal for game designers.

The hardware scrolling definitely comes in handy when writing games, as does the multitasking. My personal favourite at the moment is raytracing scenes in a 3D program while playing the game *Dune*. Seeing the expression of a PC user as frame 126 of my animation renders, while in the background enemy units are approaching, is worth every cent.

Aladdin has an unusual single view interface, which makes modelling difficult



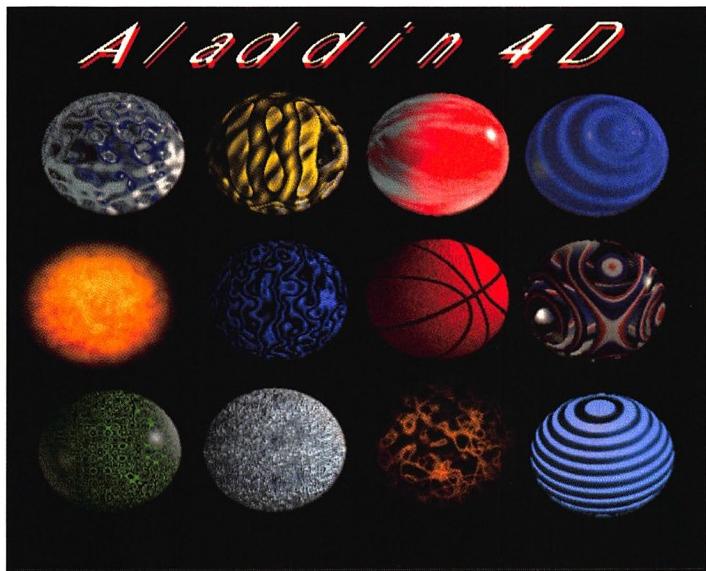
Tomorrow

The future of the Amiga is very unclear. The new AAA graphics architecture sounds great - but the current status of Commodore International has placed its destiny in doubt. However, third party add ons like WARP, capable of accelerating the Amiga well into super computer levels, will ensure the machine continues to be used as a platform for graphics for years to come.

One thing is certain - in the UK the Amiga is doing big business. In the United States it remains a popular choice for professional desktop videographers. A lot of this has to do with a US company known as Newtek and their product, the Video Toaster.

You may have seen the pilot for *Babylon 5*, a new sci-fi series in the US available out here on video. All the space scenes were created on an Amiga, eight A2000 040's I believe, using Newtek's *Lightwave* rendering software.

Previsualization for 3D scenes in *Jurassic Park* was also achieved using the Amiga. Mr Spielberg's recent production, *SeaQuest DSV*, which will be appear-



A sample of Aladdin's various object attributed including the unique gas option



*An example of Real3D's power
- check out the front cover picture for more*

ing on our TVs one day, was also done on the Newtek Toaster with the underwater shots created using 3D Amiga animations.

Along with the Toaster, Newtek have released a device they call the Screamer, which is said to propel the Amiga along at twice the speed of a CRAY-1 supercomputer.

"Where do I buy one?" I hear you ask. Unfortunately the Screamer only works on the Toaster which happens to be an NTSC device - and is not much use for us down-under folk who use the PAL video standard. The device sells for a cool \$10,000 US - cheap considering what it does.

If it's the 3D Toaster software however that you would like to use then there is a device called *Lightwave* which will emulate the Toaster hardware, allowing you to use Lightwave 3D, the software responsible for the previously mentioned 3D animation, in Australia - in PAL!

What's available?

What kind of graphics applications can you run on the Amiga? Well, I divide them up into two groups - 2D and 3D. 3-Dimensional work involves using software to build

wire-frame 3D objects, similar to CAD programs, which can then be given attributes - such as colour, texture and weight. They can then be moved and rotated like actual 3D objects.

2D covers everything else and is mainly to do with images or pictures the computer displays using pixels (picture elements), meaning the image is made up of many dots.

This includes paint and animation programs (similar to real life painting and cartoon style animation), image process-

Imagine is a favourite due to its low price and impressive effects, not to mention a pretty good modelling environment



ing (such as morphing images), CG (Character Generator) software which creates text and images for titles, and hardware and software devices for video which can create stunning transitions and effects.

The area that I am going to focus on is 3D, but as both areas are closely related and tend to rely on one another, it is important to discuss them both.

Several software packages are available for 3D work, all providing unique features from each other and making the choice for a single package very difficult.

Before we go jumping into what each can do, let's look at what your Amiga must first be able to do.

Hardware requirements

When it comes to closing the gap between high end, costly effects and the average user, the Amiga can provide more affordable professional results than other computer platforms. But, unless your idea of solving a problem is by throwing money at it until it goes away, it can still get expensive.

The three primary cost factors, apart from purchasing the software, are speed, memory

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Dir Work

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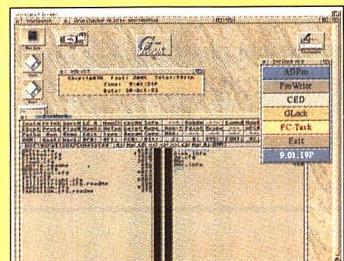
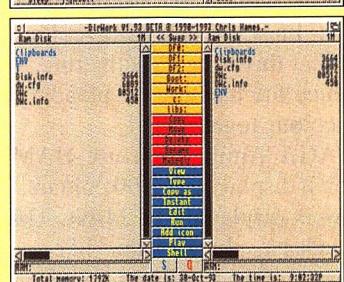
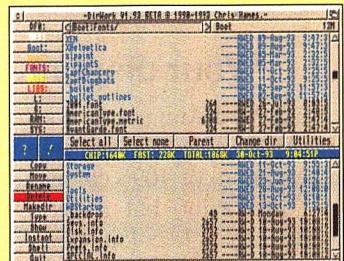
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Important Concepts

The concept of computer graphics is simple, but the process can be hard. You've probably seen the amazing results and wondered how is it all done? Well, from the most amazing to the simplest creations the concepts are much the same.

When thinking in terms of 3D graphics, we aren't strapping on our coloured paper glasses and reaching out for something in front of our face. Instead we are working in three dimensions on a flat 2D screen - this is where it gets kind of tricky.

The software mentioned sets up an environment with actual spatial dimensions. 3D computer objects have width and height as well as depth so they can therefore be viewed from any angle. The view into the scene is from a defined point, usually called the camera, and can be moved and rotated to gain different views within the scene.

The objects themselves can be moved and rotated in relation to the environment and the viewing point. The objects are made up of points and lines to form polygons, or mathematical curves. They are usually displayed during de-

sign as wire-frame models. This wire-frame represents the surface of the object and is assigned attributes or surface characteristics.

These attributes determine the appearance and physical nature of the object once shaded and rendered. They can be simply made a single colour or have the texture of an image placed on them, as well as being transparent, translucent, dull, reflective and so on.

With lighting, again defined points within a scene determine where light will come from. Objects, lights and cameras can be moved or animated freely around the environment. Each individual step or frame of movement is calculated and rendered to create a series of images to be made into an animation.

Starting next month I will get stuck into the software itself and explore modelling in more detail. You can expect regular tutorial on design techniques, hints and tips for all the popular programs and don't forget, if you're already adept in the skills of computer graphics then please send in your pictures for our Art Gallery:

and storage.

3D graphics always require speedy computers and they can never be too quick. A 68020 processor with FPU is nice, an 030 or 040 is preferred. Memory or RAM depends on the software and the kind of images you want to create. Some programs chew RAM like free pizza and the larger or more complex the objects, or size of the image you want rendered, the more memory you'll need.

On the average, three megabytes of RAM is about minimum. Like acceleration, the more the better. Six to 10Mbs is ideal without becoming enormously costly.

If creating animations, then plenty of storage space is mandatory. A single rendered frame could be 1Mb in size. Deal with hundreds of frames and you have a storage problem. Some form of removable mass storage is ideal.

ECS (Enhanced Chip Set) or OCS (Old Chip Set) Amiga.

Fortunately, images don't normally contain an individual colour for every pixel. A 24-bit display at present is available by buying an add on card. Future Amigas with AAA chipsets will display 24-bit as standard.

Software

Now that you have no money left and are saving up to buy some 3D software, let's look at the choices available. The most common package, and with good reason, is *Imagine* from Impulse inc. It provides a lot of features at a cheap price. As it is a common choice, there is a lot of support for it by way of third party software products to complement it.

The program uses polygon surfaced objects and primitive creation. The display is a quad-view system, with the fourth being a perspective view of the object or scene. Modelling is much simpler with this system and *Imagine* can create virtually any object.

Many new object creation tools have appeared on other programs since *Imagine*, which is currently the slightly ageing version 2, but the new version 3 will hopefully be available any day now. One thing

Your display

A standard Amiga can display images in HAM (Hold and Modify) mode which is a maximum of 4096 colours. This may sound like a lot, but it takes about 64 shades of a single colour to go from light to dark without noticeable banding - distinct lines of changing colour. A way around this is called dithering, which can reduce the banding by blending the lines of colour together.

AGA Amigas can use HAM 8 mode which displays 256,000 colours. The ideal way is displaying in 24-bit. This gives a broadcast, photographic like quality at a palette of 16.8 million colours. If an image is 640 pixels wide by 512 pixels high, then it contains 640 by 512 pixels, 327,680 in all. Depending how many colours are in your image, it's plain to see you will quickly run out of colour on a standard

What is raytracing?

Raytracing is a process of rendering (when the computer is calculating the colours and shading of objects in relation to lights in the scene) and allows more realistic images to be produced. This is because raytracing literally traces the directions and reflections of rays of light within a scene.

According to the surfaces assigned to an object, a ray of light can reflect off, refract and bend within, or pass straight through an object with adjustable, varying degrees. A scene similar to the real life situation of two opposing mirrors could, in theory, determine the reflected rays of light back and forth into infinity. Raytracing takes much longer to calculate and places the most demand on computer power.

must be said about *Imagine* and that is it can be very user unfriendly to learn, especially because of the poor manual.

However, because of its popularity, there are several books available to help out. As a first 3D package I recommend *Imagine*. Animations can be made and fine tuned with ease using keyframing (place an object at one point, then another, and the computer calculates the movement between the two).

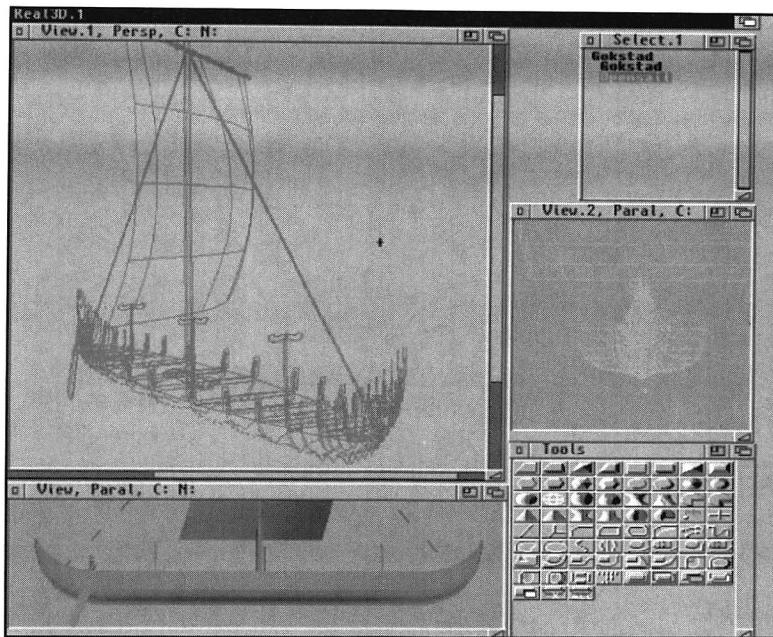
Objects themselves can be animated using the Cycle Editor for cyclic motions, like a human walking, and then be placed within the main scene to make the character appear to walk from one place to another. With version 3 claiming to give a lot of powerful, high end features inside a more refined program, *Imagine* may be set to stay the most used 3D program on the Amiga.

The other popular software choice is *Real3D* version 2 - a very meaty program requiring a fair amount of smarts to use. It does however, give the most powerful modelling, animating and rendering tools on the Amiga, not to mention other platforms.

Things like collision detection between objects with variable elasticity, gravity and other forces to attract or repel objects. Then there's inverse kinematics which acts like joined skeletons within an object, and boolean operations for drilling, cutting and slicing objects. Constructive solid geometry and B-spline curves create objects made up of mathematically smooth surfaces rather than many polygons. The resulting rendering quality is amazing.

The program layout is totally configurable and it happily multitasks internally. With the layout, for example, you can have a single view or a view for every angle. One view can be rendering the image while at the same time another can be used for editing the objects.

The program uses a hierarchy structure



Real 3D: A complex interface, that's a real gem once you get the hang of it, coupled with amazing animation power adds up to an exceptional package

for creating objects and scenes like the directory system of the computer. A root directory with a drawer called Tree could have a trunk object and a Branches drawer inside. In this drawer with the branch objects is the Leaves drawer where the leaves exist. By manipulating the Tree drawer the whole tree is affected.

As mentioned before *Real3D* 2 is complex and takes time to get the hang of but with some persistence the results are well worth the wait. This program should be considered by those who are serious about computer graphics.

Aladdin 4D is the updated version of the old *Draw 4D* program and offers a different approach again to 3D graphics along with some impressive features.

Aladdin, unlike *Imagine* and *Real3D*, does not raytrace. *Aladdin* sidesteps this by using raytracing algorithms when rendering, giving excellent image quality allowing reflections and refractions at a higher speed. *Aladdin* can even simulate shadows. The layout is a single view into the 3D environment which can be viewed from different angles. The program is easy to use, easier than *Imagine* anyway, but modelling can be awkward. The most interesting feature of *Aladdin* is the ability to create gases. A gas is a cubic shape of

varying transparency and turbidity and can be animated to create amazing effects like erupting volcanoes or fiery suns.

Version 3 will soon be available also, with spline modelling and lens flare. *Aladdin* is perfect for the A1200. It's a wonder the two aren't packaged together and sold as a graphics computer. With the HAM 8 output and rendering quality the graphics are superb and the program hums along nicely with the A1200's 020 processor. In my opinion the image quality of *Aladdin* is better than *Imagine*, version 2 at least (I am yet to see v3.0). It doesn't provide the modelling and to an extent the

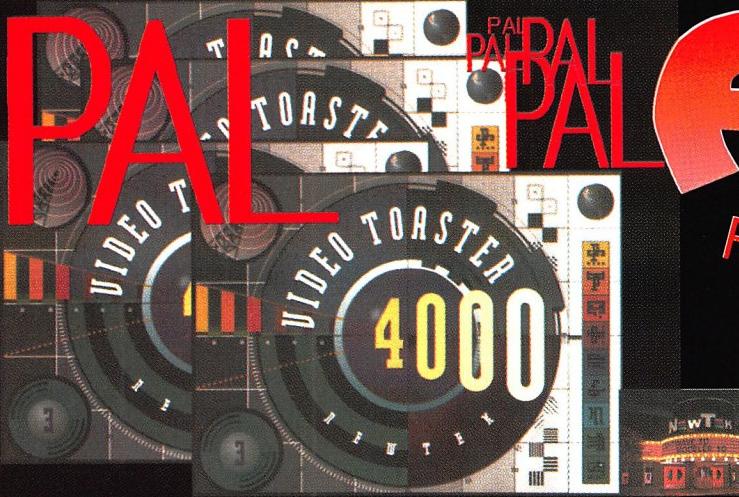
animation versatility of *Imagine* and is also more expensive.

Caligari, like *Aladdin*, does not raytrace but again achieves impressive rendering quality. It also uses a view into 3D space to create objects and scenes and has removable menus across the bottom for the various functions like stunning free-form deformation. *Caligari* isn't as popular as the first three packages and is therefore harder to obtain (no harder than *Lightwave*, trust me).

Other programs also exist on the Amiga for 3D graphics like *3D Pro*, and *Sculpt 4D*, however due to the limited availability and age of these programs they aren't as widely used anymore.

If you would like to see some information on a product that you have heard of then please send me a letter. The more feedback I get on the less mainstream programs being used the more I will include them. For example, *3D Pro* is apparently being updated with many new and interesting features. *Playmation* is another quite excellent 3D character animator allowing bendable, skeleton controlled spline objects.

I'll be updating you on the latest in 3D animation software in our new animation column - so stay tuned for more details.



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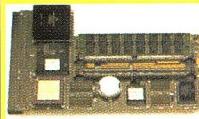
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Making room and finding software

In a jam? Can't make it work? Write to our Help Line column, where our team of experts will provide plain English answers to your problems.

Making room

Dear Help Line, firstly, well done. I think ACAR is first class and thanks to your new Help Line I have been able to overcome many of my problems already. One that I'm still having difficulties with is this. I own an Amiga 500 with 1Mb of RAM and an external floppy drive. Since I do a bit of wordprocessing, mainly letters to friends, I recently decided to purchase a set of PD font disks.

The problem is that I can't get them working. Since I don't have a hard drive (yet) I can't install them and there's not enough room on my word processing disks either. I have tried deleting files from my word processing disks, but it starts a chain reaction and my disks have problem after problem trying to load. Is there an easier way to get access to the occasional font?

**Bill Whiffield
Orange NSW**

ACAR: Thank you for your comments - we think so too and will continue to pro-

duce the best mag possible, as well as continuing to provide help for new and seasoned users alike.

Now to your problem - it's a common one. Obviously a hard drive is a huge advantage, especially in your situation, as you can have all your fonts in one place accessible by all programs that use the same type of fonts.

There are also two different types of fonts - bitmap and outline.

A bitmap font is created like a picture in a paint program, and if you make it bigger it turns into Lego. Outline fonts are better, as the font is stored as a mathematical expression that lets it be drawn to any size.

If you have a particular font in mind, you could remove a couple of fonts from the Fonts directory to make room for the one you want.

Workbench 2 makes life a lot easier when doing things like this, as well as many other advantages.

Another solution, which only works with bitmap fonts, is to use the assign command

*to assign fonts: to one of your Fonts disks. Open a CLI and type in something like:
assign fonts: fontdisk1.fonts*

Fontdisk1 should be replaced with the name of your font disk. This way, when your word processor searches for a font it will look for it on the fonts disk. This also means that it won't use the fonts on the word processing disk itself, only the ones on the font disk.

Desktop Video

Dear Help Line, in the April issue you helped out Mr Ivan Campbell with some information about using genlocks. I am also interested in having a dabble in this area. I have *Deluxe Paint IV* on my A500 and was wondering what else I need other than a genlock and VCR.

**Mark Howard
Maria River, NSW**

ACAR: A VCR, Amiga and genlock are the basic building blocks for desktop video. There are, however, many other bits and pieces you can purchase that will make your productions easier to create and give you much more power and creativity.

For example, once you have all of your graphics, titles and animations together it's a lot easier if you can load them all into one player program, which puts all your pieces together to create a presentation. Adding sound is nice too!

To do this, use something like Scala. There are several versions of this program available. The original is called Scala MM500 and was designed for home titling; Scala MM200 is being superseded by Scala MM300 and is a higher quality program with many options.

These three programs allow you to create titles on the fly, as well as create presentations by combining all your graphics and animations.

Attention all new A1200 owners in Australia and New Zealand

If you are having problems getting to grips with your new machine then "An Introduction to the Amiga 1200" is for you. It is a One Hour Training Video designed to get you up and running with the minimum amount of fuss. Order your copy now by Bankcard, Mastercard or Visa on:

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You can also add synchronised sound samples and MOD format music to your presentation. While Scala MM300 is the best, it also carries a hefty pricetag, at around \$550.

Scala MM500 can be found for around \$160, a very good program for the price, with enough power to get you up and running.

Another option is the program that came before Scala. AmigaVision is the same sort of thing as Scala but not as flash. You need to create your titles in a paint program, but you can still string presentations together.

Discount Computer Software of Lindfield on (02) 416 3523 currently have several copies of AmigaVision - no apologies if they're all gone by the time you read this!

Other add-ons in the software side of things include things like Art Department Professional (for image conversion), Cinemorph or Morph Plus (for creating your own own morphing animations), and perhaps a landscape generator like VistaPro or Scenery Animator, for an endless supply of backdrops.

You may then want to get into 3D programs such as Imagine or Real3D, and here the main limit is your imagination - along with the amount of free RAM and the speed of your machine.

D-I-Y installation

Dear Help Line, I have an Amiga 2000 and have just recently purchased an extra internal disk drive to add to the DF1 slot.

I am also trying to install this myself to save money, I have tried many different things to get it going but to no avail. Do you have any quick suggestions or help to offer?

Mark Holsworthy
Forbes WA

ACAR: If your A2000 is still under warranty, the extra drive should be installed by a Commodore approved service centre. Like-

wise, if you're not confident of your abilities then it's best to take it to someone who knows Amigas, but if you're determined to continue the installation is quite easy once you know how.

Firstly take off the cover. Unbolt the mounting bracket to make it a lot easier, and change the jumper J301 on the mother board to on. The drive itself needs to be allocated another device number as well, by changing the jumper setting on the drive.

Holding the drive and looking from the front (looking at the slot) the jumpers on the drive should be connecting the two bottom pins on the left hand side.

Making sure that the power cable is connected the right way and that the flat ribbon cable is also connected correctly (check with your other drive), put it all back together.

Before you put back the cover, plug it in to test it. If all works OK, replace the cover and enjoy.

If you're still stuck you may have a faulty drive or cable, in which case check with your service centre.

The next drive you add will plug into the port on the rear of the computer (DF2), after that they will just daisy chain from DF2.

Finding Software

Dear Help Line, It seems to be getting harder to find stores carrying Amiga hardware and software. Many of the department stores that I used to go to no longer carry Amiga products.

I think I speak for everyone in asking if it's possible to print a list of Australian dealers that are currently carrying Amiga products. I know I am probably asking a lot but perhaps just their name, suburb and state as well as phone number. I guess you would also need to list what they carry as far as software, hardware and if they specialise in a particular field.

Ann Fowler

Mona Vale NSW

ACAR: Dear Ann, you will probably be pleased to know, if you don't already, that there's an Amiga specialist just down the road from you called Computer Outpost. Ph: 9795833. Darren carries a wide range of Amiga hardware and software from games to productivity.

In regard to a list of all dealers, I believe it would be something that many users would find beneficial. We'll see what we can do, so make sure you keep checking this spot.

If you are selling Amiga products or are offering an Amiga service and would like to be added to this list drop us a line. Just mark your Letter "Attention HelpLine". □

CHALLENGE CORNER

Our last challenge corner disappeared as mysteriously as it arrived - however Kleong Shure was following our advice at the time. Thanks to those readers who responded with some additional hints. We've filed them away for future reference. This month's challenge corner is a little easier.

MS-DOS Syquest?

Dear Help Line, Device PC0: under Workbench 2.1 and above will allow the Amiga to happily read, write and format MS-DOS floppy disks. What do I have to do to configure the Amiga to do the same with a PC formatted Syquest cartridge?

William Fence
Microville

ACAR: Several Amiga experts were convinced they had seen this done, but none could remember how. So, we turn the challenge over to our readers. The first person to supply a working solution will receive a FREE subscription to Amiga Review.

An Introduction to the Amiga 1200 Volume 2 - Out Now!

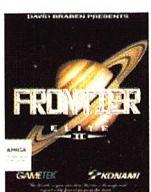
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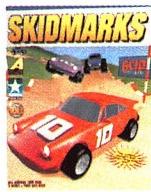
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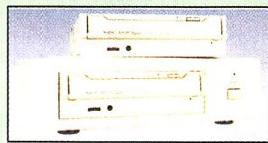
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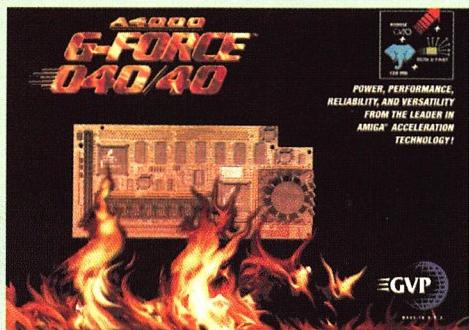
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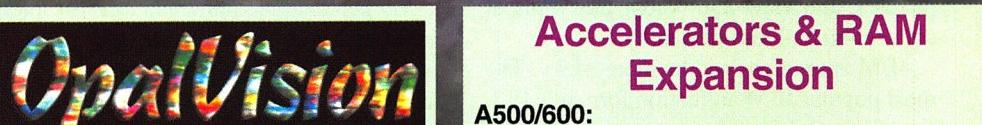


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From the Manager

You have all no doubt heard of the problems with Commodore & its associated distribution companies. At the time of writing (5/5/94) the Commodore situation is bad, but hopefully it will turn into something positive. Perhaps a newly owned Commodore bigger and better than ever before? I would like to point out that even in this situation we will continue to fully support the Amiga & its customers as we have pledged for many years now. We will always have new Software and Hardware to add to our already large range. Many of the Amiga's third party suppliers have stated that they will continue to bring out new products and upgrades in the future despite the CBM situation. Shortly, amongst other things we will see the OpalVision Video Processor which will in its own right increase the need and popularity of the Amiga. My Pledge to you (the Customer) is that MVB Computer Supplies will continue to fully support the Amiga & its customers with new and exiting hardware & software, not to mention the continued support for current software & hardware. As a closing note I will say that the book has not yet closed on the Amiga's future, however these are turbulent times. I strongly urge you to hang on as the final chapter has not yet been written for the Amiga. So more than ever support your Amiga Dealer and think positive.

Darrell Vanderwolf



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Plunder the IBM World

Wearing my other hat, that of Assistant Editor of *Australian PC Review* magazine, I spend a lot of time poking around those ungainly turbo-charged dinosaurs of the computing world, IBM compatible PCs. The more I use them the more I like the Amiga, but as with any garbage heap, there's useful stuff there if you're willing to look. The Amiga's PD and shareware world is enormous, but the vastly larger IBM user base means it can't help but have a lot more.

The Amiga's ability to read IBM format disks (with Workbench 2.1 and higher, or extra packages like MessyDOS for users of earlier versions) is a definite advantage; most Amigans only have double density drives but if you're lucky enough to have a high density model then you can read any IBM disk that comes your way.

Why would you want to, I hear you ask. Unless you've got an emulator, IBM programs are no use at all, and you can get Amiga equivalents for most stuff anyway?

But there are many other things out there besides programs, Grasshopper. A world of sounds, images, animations and text files awaits you, and the most stylish way to get into it is via a CD-ROM drive.

Any Amiga with a SCSI interface (in other words, the bulk of serious machines) can use a CD-ROM drive as easily as plugging it in, and the drives themselves are dropping toward the \$500 mark. Or, of course, you can just sponge off an IBM-owning friend, who is likely to have one of the cheaper IBM-only drives with special nonstandard interfaces.

Getting at PC graphics

To display IBM pictures a standard Amiga will do fine; with a couple of GIF viewer/converters (FastGIF and WASP on Fish 850 and 716), and maybe a viewer for the newer JPEG format (see FastJPEG, below!), you're set to view the vast majority of images; unfortunately nobody seems to have made a public domain BMP picture viewer, so a lot of Microsoft Windows images aren't accessible without considerable expense on something like *Art Department Professional*.

For better quality and more convenience, an AGA machine's the go; simply set up GIF and JPEG datatypes and you can load alien images as if they were standard Amiga pictures, and view 256 colour pics without conversion and loss of quality.

IBM animations can be more tricky. The most popular IBM animation format is FLI, not dissimilar in concept to the Amiga's Anim-5, and there are FLI players and converters for the Amiga, but if you want more than black and white you need either an AGA machine or expensive commercial conversion software. There are, naturally, a fair few other animation formats, which don't talk to the Amiga at all well.

And sounds ...

Sounds are simpler. Most IBM sound files are either WAV, VOC or RAW format, and the program to convert any one of these to Amiga-comprehensible IFF-8SVX is *Sox*, which you can find on my old HotPD 9 companion disk set.

I've been getting considerable entertainment lately by downloading alternate sound sets for the popular IBM shareware game *DOOM*, and just converting them all to IFF and keeping the most amusing ones (would you like Ash from the Evil Dead movies saying "swallow this!" as your error beep?).

The only real annoyances I've run into have been with RAW format sounds and ones that use odd mutations of the VOC or WAV formats. *Sox* has tons of possible options you can set, but you usually don't have to - just use the CShell (see below!) scripts it comes with for easy conversion. But RAW sounds could be anything, so you have to suck and see until you get a configuration that doesn't sound like an exploding gravel pit. I've never had a sound that I couldn't convert eventually.

Or text

Text files are the simplest of all. As long as they're not formatted for some weird word processor, all you have to do is convert all the carriage returns and line feeds to line feeds only, so the text will display with no glitches on an Amiga. *CrossDOS*, included with WB2.1+, can do this automatically from floppies, and there are any number of other conversion utilities. If the file is in a word processor format, there's a chance one of the Amiga's good commercial word processors can load it; call your dealer and find out!

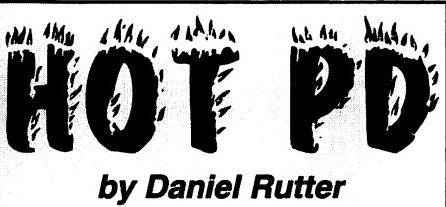
My personal recommendations for interesting bits and pieces are the old PC Animation Festival disc (some stunning stuff on this one), any decent shareware disc like the Night Owl's series or Libris Britannia, or any one of the sound effect or graphic CDs, and there are plenty of those! Avoid the crummy Asian shareware bonanzas that come free with many IBM multimedia kits; giving them away is often the only way to get 'em off the shelf.

Fish postponement

Regular readers will be awaiting another Fish smorgasbord this month - but not with very great expectation, in view of Fred Fish's delay in getting the last set of disks out, thanks to switching over to CD-ROM distribution.

It's happened again - the Fish disks aren't out yet (they should be by the time you read this). But there's a new Fishing Report, in which Fred describes progress so far. The CDs have been a big success; in Fred's words:

"At this point I am completely sold out on the first and second CD-ROM's. The



third FreshFish CD (Mar/April 94) started shipping on Mar 14th and I still have sufficient stock of these CD's to meet the anticipated demand for the next month or two. The next FreshFish CD will be the May/June 94 issue, and is expected to go into production during the second week of May and start shipping by about May 15th.

"The first FrozenFish CD-ROM was completed on Mar 30th, but has not yet been released to production. This CD contains over 6000 archives, including the complete archived contents of floppy disks 1-975, all of the GNU and other useful utilities off the latest FreshFish CD, and all of the new material on the first three FreshFish CDs that was not included in the floppy library.

"In summary, this CD currently contains everything I have ever released on floppy or CD, except for the final 25 floppy disks.

"Since we are now only a few days away from completing work on the final 25 floppy disks, we decided to put a hold on production of the FrozenFish CD while we complete disks 976-1000 and integrate them into both the FrozenFish CD and the GoldFish CD. As soon as the floppy disks are complete on about April 7th, they will be integrated first into the FrozenFish CD and then the GoldFish CD. The updated FrozenFish CD should be ready to go into production no later than April 14th, and the GoldFish CD should follow a few days later. Shipping of the FrozenFish CD should commence on about April 20th.

"The GoldFish CD-ROM will be a two CD set, in a single slimline jewel case, and will contain the entire contents of the 1000 disk floppy library in both archived (BBS ready) and unarchived form. The first CD will contain disks 1-1000 in archived form, and disks 1-250 in unarchived form. The second CD will contain disks 251-1000 in unarchived form. (Note: the breakpoint at disk 250/251 may change slightly as the disks near completion, depending on the free space available on each CD).

"The GoldFish CD will contain a program called *PufferFish*, that makes it simple to create master floppy disks directly off the CD-ROM, for further duplication and distribution. It will also have the same level of BBS support as the first FrozenFish CD.

"The GoldFish CD is expected to be

complete a few days after the first FrozenFish CD, and follow it into production on about April 18th. Shipping should commence on about April 24th."

Consolation prize

As compensation for the absence of Fish, I've done another single companion disk, available from Prime Artifax as HotPD 16. It contains the following goodies:

Mouse Odometer

I last mentioned this supremely silly program six months ago - it's back, and it's even better. It still tells you how fast you're moving your mouse and how many times you've clicked the buttons, but now there are several new units, which I think you need to know. You can measure your mouse's movement in fathoms, rods, chains, survey feet and nautical miles (not TOO silly), but you can also do football fields, trips around a floppy disk, CD-ROM disc, A2000 or A4000 case or sheet of paper (silly) or for the truly adventurous you can measure in Empire State Buildings or trips to the Sun.

As if that weren't enough, it does top scores for the day and all time daily high scores. I'm sorry, but this program has impressed me hugely.

You still need WB2 to run it; I'd upgrade for this alone.

Fast JPEG

I only mentioned this speedy JPEG image viewer last month, so I'll be brief about the 1.1 update; it fixes various minor bugs, adds a simple slideshow mode, some extra rendering modes including a "hide in the background 'till you've finished" mode, a undithered fast mode and an even faster grey scale mode. There's keyboard control, a standard file requester and better HAM conversion speed. Whether you're using an AGA or an ECS machine, even with Workbench 1.x, this is the JPEG viewer for you - and it's free; nothing more to pay!

Extra Icons

MagicWB, the rather groovy user interface that's swept the Amiga community, laying waste to chip RAM wherever it sets

titles, continues to attract more and more third party contributors, creating extra icons in its distinctive shaded style. I've included no fewer than three of these new icon collections; KMI, MagicIcons 2 and Upox Magik. For lesser users I've also included the more prosaic WB2Stuff collection, which mimics the standard Commodore icons and so needs no extra installations, but still gives you specific, distinctive icons for a load of new things. All in all there are almost 200 new icons in this collection.

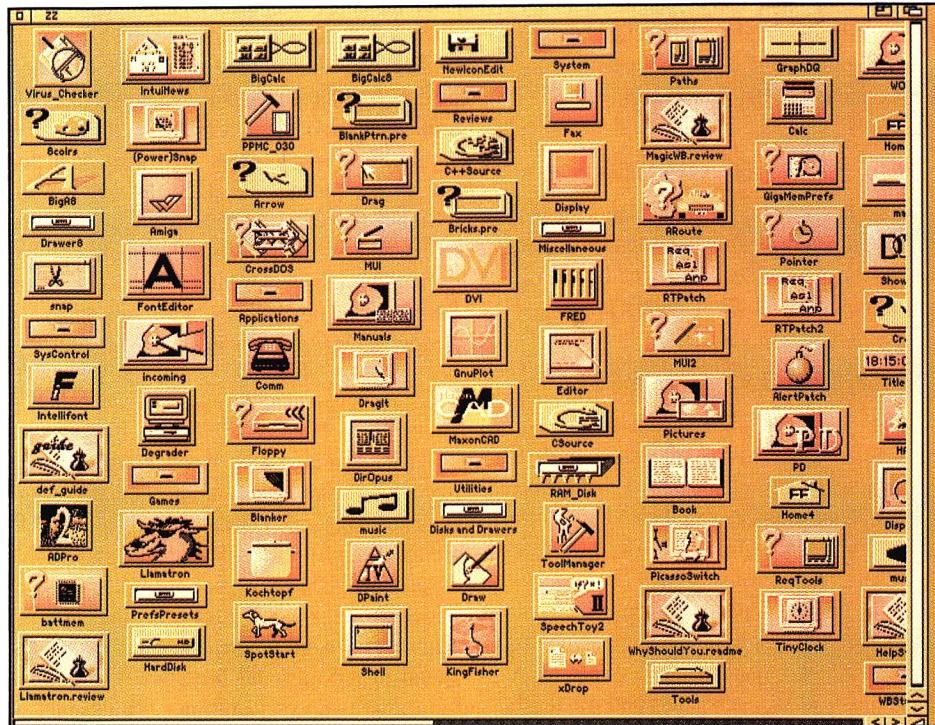
CShell 5.37

The command line has taken a beating from all these johnny-come-lately graphical user interfaces, but the likes of MagicWB aren't enough to kill off the mighty UNIX-based shell CShell, which proudly coexists with said package on my machine. For intuitiveness, a graphical interface is streets ahead of a command line, but if you want the ability to do very complex things quickly (after spending a while in training, of course) then the command line is for you.

Csh (as its relatives know it) 5.37 features over 100 built in commands, 70 functions, new system variables, file name completion, programmable command line editing, file classes, auto cd, lazy cd, intuition menus for the shell window, automatic RX-ing, local variables, statement blocks and tons of other muesli which causes my fellow propeller-heads and I to become unduly excited.

Cool bits added since 5.31, the last time I mentioned it, include no more annoying requester when you press return and your current directory is on an unmounted volume (a removed floppy, for example); the dir command can now use the _dirformat variable automatically to define the look of directory listings; and requesters now appear on the same screen as CSH's window (ie, they won't suddenly sprong up in the middle of a multitasking game). Csh now has multi-user support; if you use this one you qualify as a Gold Star Power User. You can not only execute s:.login when you start Csh, but also s:.logout when you quit.

The dir command supports soft links (likes across devices - something AmigaDOS doesn't officially support, but don't tell Commodore since various people have implemented them). The rather cool



Less than half of the icons on the companion disk!

rehash command buffers the entire DOS search path for super fast filename completion from anywhere, using escape-p instead of the usual tab so you don't get them mixed up.

Command lines aren't aborted any more if one lousy pattern out of several fails to match - only if all of them miss. You can do simultaneous input and output redirection with "<>"; the combination source/destination must be either "NIL:" or an interactive file. There's also scrolling of more than one line at a time (one line scrolling on an ECS machine is not very fast at all, thank you very much ...).

There are, of course, literally dozens of other small changes and more than a few further bugs squished; it's definitely worth updating. On that note, this one needs WB2 as well, folks.

CShell is far too big to fit on the single companion disk (we're talking about 800k total here!), but I'll be surprised if v5.37 isn't on this next batch of Fish disks. Call your favourite PD library and ask! ☐

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Stop Press

Welcome back to Online Amiga. Last issue I announced the sad news of the closure of the Australian SPOT Registration Site. This issue brings news of a brand new rego site in Oz for this highly popular pointing software, so there is no longer any need to go through all the hassles and expense of obtaining an overseas bank draft to register your copy.

The author of SPOT (Nico Francios) has advised me that Dean Brandt of SlipDisk BBS, has now been appointed as the new Australian Rego and support site. Contact Dean at 7/6-10 Railway Pde Kogarah NSW 2217, or call SlipDisk BBS on (02) 587-3459; the Fido address is 3:712/712, the AmigaNet address 41:200/666.

Dean tells me that all the latest versions of SPOT will be available from his BBS either via file request with your mail or simply as a free download.

Dean is also offering an excellent 'voice' support service to all registered users. Way it will work is that once you have registered your copy of SPOT with Dean, he will supply you with a voice number which you can contact him on between 9am and 10pm seven days a week for help with any urgent problems. There

is absolutely no extra charge for this support.

This is the type of support I'd like to see offered for the many other shareware programs available in the Amiga communications scene. The best news is that registration of the software is still only \$50.00 - an absolute bargain.

CD-ROMs

CD-ROM drives have been around for quite a while now and many BBS systems around Australia are taking advantage of them as an easy and relatively inexpensive way to add up to 650Mb of files on each disk. I recently added a CD-ROM drive to my own BBS machine and was amused to discover how little thought is being put into some of the disks. Allow me to explain.

I asked other system operators their opinions on Amiga related CDs. There seem to be two favourites around; Aminet and the ever popular Fred Fish series of public domain software.

I already knew a fair bit about the Fred Fish series of PD disks, so made further enquiries about the Aminet disks. Produced by Walnut Creek in the USA, the CDs are a periodic image of the Aminet Usenet sites that carry mammoth amounts of Amiga freely distributable files. This is all well and good, but although these disks are designed to be used on a BBS, the makers seem to have forgotten that many (if not most) Amiga supporting boards are actually run on IBM clone machines, running MS-DOS or one of its close relatives.

Where the problems come in is that MS-DOS, PC-DOS, DR-DOS et al are a bit brain dead when it comes to any file names that are longer than eight characters, plus a three character suffix. Any filename longer than this can't be read and is effectively inaccessible. This not only causes problems for BBS operators, but can also inconvenience any Amiga

owner who also has access to a clone CD drive.

Provided that the CD-equipped IBM can read the disk, you can copy files from a CD onto 720k disks (or 1.44Mb, if you're lucky enough to own such a drive for the Amiga) and transfer them over easily. But you can't do it with long-named files, because the clone won't be able to read them. I'm told that the last Aminet disc was about half full of long-named files.

So don't get caught out if you're considering buying an Aminet disk for your own personal use. Unless you have a CD-ROM drive hooked up directly to your Amiga, or are running OS/2 or Windows NT on an IBM, the disk is only going to be half useful to you.

Back on the Fred Fish CD-ROM discs, Fred as usual has his act together perfectly. Soon to be released is the Frozen Fish CD-ROM disk which will contain archived files of all programs that have appeared in the Fish Disk PD library collection, from disk one to 1000. Naturally, all the filenames work with MS-DOS.

Caveat emptor - 0055 BBS numbers

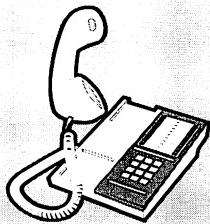
Let the buyer beware, or in our case, it's more like let the modem user beware. I've seen a couple of 0055 bulletin board systems begin to pop up again here in Victoria and want to warn people to not fall for the trap.

For those that may not know, a 0055 service may be hired from Telecom for a set fee, and then whoever owns the service collects the money from timed calls.

Charges vary, but average from thirty-five cents to over a dollar for every minute of connection time. This can add up to rather a lot of dough for downloading supposedly free software.

While there's nothing illegal in what these people are doing, I personally have a problem with the way some of them operate. They prey on the "new" modem user, their advertisements often giving the impression that they have services that can't be found elsewhere; thousands of files and the ability to talk to people all over the world. Seasoned modem users know you can get this anywhere, but beginners can be sucked in - and the soft-

Online AMIGA!



by Andrew Leniart

OnLine AMIGA!

ware online isn't necessarily all that hot anyway.

What's worse though is that some of these systems can be set up in such a way that it's difficult for a caller to find his way around. Every second you spend trying to figure out what to do to get to those blasted files is costing you plenty and making the system operator heaps. Sure, you might never call that system again, but the damage has been done. The money has been made and the system awaits the next unwary caller.

If you want my advice, don't let curiosity get the better of you. I have found in my own experience that whatever the majority of these systems offer is available for less or, more times than not, absolutely nothing from a hobby system for the cost of a local call.

Concluding

That's about it for this month. Next month I'll take a look at a new and totally free piece of software for offline mail reading and also discuss some of the do's and dont's when participating in various network echomail conferences, giving you tips on how to keep those moderators off your case.

Those that wish to contact Andrew Leniart directly can do so by mail at his new address: Amiga Online! PO Box 1060, Hoppers Crossing Vic 3029 or via modem at his BBS...

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NewType explained

Welcome Blitz coders, to another installment of your monthly Blitz column. This month, at the request of several beginners, we'll be taking a more in-depth look at the "NewType" variable.

NewTypes, Structures, Records or Custom types are a few different names for these useful but tricky variable types. Several other Amiga languages have the ability to handle these, but it's not often you find these supported by a Basic language. Blitz is the exception.

Any programmer who has tinkered with an Amiga, will at one time or another have run into what the Amiga operating system calls structures. The operating system uses them extensively to stick related but differing variable types into one lump.

The concept is not unlike a database design. Imagine you wanted to store the name, age, height and weight of a hundred people in variables. There are two ways you could go about it, one using normal variable arrays, and the other using NewTypes. Here's a short example, to give you an idea of the difference:

Normal variables

To store one hundred people, we would need four different arrays, say:

```
Dim name$(100),age.b(100),height.q(100),weight.w(100)
name$(1)="Steve Boothman" ; String variable
age(1)=30 ; byte type variable 0-255
height(1)=1.7 ; Quick type variable (allows you to have decimals)
weight(1)=102 ; Word type variables 0-65536
```

To load the data, would need a For ... Next loop, and four commands for each person. We could access the data for a given

person (person x) by looking up and displaying the values with a snippet of code like this:
 Nprint "He's called
 ",name\$(x)," and he's
 ",age(x)," years old."
 Nprint "He is ",height(x),"
 meters high, and weighs
 ",weight(x)," Kilos."

There's nothing wrong with this method, it works,

and is easy enough for most programmers to understand. But let's look at the alternative method, using NewType variables:

```
Newtypes
NEWTYPE .Person
  name$
  age.b
  height.q
  weight.w
End NEWTYPE
```

This is the NewType definition. This tells the Blitz compiler that all variables that end in ".Person" from here on, are of this new custom variable type, and so have a name, age, height and weight.

In the same way that a suffix of ".l" tells Blitz a variable is a longword, the suffix of ".Person" indicates that the variable is a user's custom NewType.

Individual fields within the NewType structure can be assigned and accessed by using the backslash character. For example, if we had just one person called Steve, we'd find out his weight by the command:

```
Nprint steve\weight
```

If Steve went on a diet and lost 3 Kilos, we'd be able to change the weight value with the command:

```
steve\weight=steve\weight-3
```

Where the real strength of NewTypes lies, is when we need to access all the data fields within the NewType at once, for example:

```
steve\name="Boothie",30,1.7,102
```

As you can see, we've saved ourselves three commands and a bit of speed by setting up the whole set of related data with just one command. But it gets better ... You can have arrays of NewTypes, just like this:

```
Dim Roll.Person(100)
```

This tells Blitz to allocate one hundred NewType variables, all containing a field for a name string, age, height and weight.

So, as you can see, NewTypes can be used to handle your data in a more compact and related way than their normal variable relations. In our above example, one array was needed instead of four. This makes the source code smaller and more readable, once you can overcome the initial conceptual leap that NewType thinking requires.

Tricks and tips

When defining a NewType structure, field names without a suffix will be assigned the type of the previous field. More than one field can be listed per line of a NewType definition. They must however be separated by colons. The following is another example of a NewType definition:

```
NEWTYPE .Ship
  x.w:y:z ; x and y are also words (see above)
  value.w
  speed.q
  name$
```

End NEWTYPE

When you make a reference to a string field contained in a NewType, you must not include the normal string variable suffix \$ or .S as this will cause a "Garbage at end of line compile time error".

```
steve$name = "Boothie" ; this is cool  
steve$name$ = "Barry" ; This is NOT cool!
```

You can even put NewTypes within NewTypes! For example, in your next 3D blockbuster, storing vector lists for objects has never been so neat, tidy and fast as this:

NEWTYPE .Vector

```
x.q  
y.q  
z.q
```

End NEWTYPE

NEWTYPE .Object

```
position.Vector  
speed.Vector  
acceleration.vector
```

End NEWTYPE

Once defined, NewTypes can be assigned to all variables that both types of DEFTYPE command could be used on, just as though it were another normal variable.

You can use arrays within NewTypes as well! You must use the square bracket syntax when defining arrays within NewTypes, to solve compiler confusion. Heres an example:

NEWTYPE .Record

```
name$  
age.w  
address.s[4] ; Same as dim address$(4)
```

End NEWTYPE

One problem you might encounter when using NewTypes is that path names can become very long. When you've typed the path "addressbook".

Record\address[3] a few times, it's time to use the UsePath compiler directive.

For example, the following code:

```
UsePath shapes(i)\pos
```

```
For t=0 to 9
```

```
\x+10  
\y+20  
\z-10
```

Next

is expanded internally by the compiler to read:

```
For t=0 to 9
```

```
shapes(i)\pos\x+10  
shapes(i)\pos\y+20  
shapes(i)\pos\z-10
```

Next

This just about wraps up our coverage on NewTypes. To close with, we'll have a look at a practical example usage of NewTypes. This demo program comes from the genius that is Neil O'Rourke, and is a fine example of using NewTypes when passing data to the system, in this case, a taglist for the

OpenScreen command. This demo opens a Public Intuition Screen from within Blitz::

```
; So constant definitions for the look and feel of our  
; Public screen tags.
```

```
#TagBase=$80000000  
#Width=#TagBase+$23:#Height=#TagBase+$24  
#_Type=#TagBase+$2d:#PubName=#TagBase+$2f  
#DisplayID=#TagBase+$32:#Depth=#TagBase+$25
```

```
#DetailPen=#TagBase+$26:#BlockPen=#TagBase+$27  
#LikeWB=#TagBase+$47:#Pens=#TagBase+$3a
```

```
#HIRES=$8000
```

```
N$="Public Name" ;what we want to call our public screen  
Na$="A Custom Screen"
```

```
NEWTYPE.tl  
a:l:b:c:d:e:f:g:h:i:j:k:l:m:n:o:p:q:r:s:t:u:v:w:x:y:z  
End NEWTYPE
```

```
DEFTYPE.tl TagList ; Defines "Taglist" as the above NewType  
MyPens.l=-1 ;Use the 3D Look
```

```
NoCli ;Don't want blitz putting up a CLI window
```

```
TagList@=#Width,640,#Height,256,#Depth,2,#DetailPen,0,#BlockPen,1  
TagList@=_Type,#LikeWB,#DisplayID,#HIRES,#PubName,&N$,#Pens,&MyPens
```

```
;This opens a screen for us, and is similar to OpenScreenTagList_ScreenTags  
0,Na$,&TagList
```

```
;Find the address of the Intuition screen we just opened  
*ms.screen=Addr Screen(0)
```

```
*MyScreen.Screen=*ms\screen
```

```
;And enable the public screen mode  
Status.w=PubScreenStatus_(MyScreen,0)
```

```
If Status<>0
```

```
;We made the screen public, lets make it the default screen...  
SetDefaultPubScreen_(&N$)
```

```
;And enable the "Shanghai" mode...  
SetPubScreenModes_(1)
```

```
;To prove this all worked, open a CLI window  
cli$="con:0/12/640,243/A CLI window on a custom screen"  
If WriteFile(0,cli$)
```

```
Execute "",Peek.l(Addr File(0)),0  
CloseFile 0
```

```
EndIf
```

```
End If
```

```
CloseScreen 0
```

That's all we have room for this month. As always I am happy to get your feedback and suggestions. We also need more code for the Australian Blitz II PD library. You can reach me via modem on either Powerhouse BBS (042) 616380/622170 24 Hours 14K4 or in Sydney on Amiga Connection BBS (02) 970 6444 24 hours 14K4. You can write me snail mail at Box 1420 Wollongong NSW 2500. Blitz on! □

Programming Tips and Tricks

To satisfy recent requests, this month's column focuses on programming tips and tricks for your C64. If you have some of your own you'd like to contribute, send them to the address printed at the end.

No more input?

To remove the question mark from INPUT commands on a C64 type POKE 19,1. POKE 19,0 to turn it back on. On a 128 you can do the same by POKE 21,1 and POKE 21,0 to turn it back on. It's best to turn the question mark off immediately before the INPUT and turn it on immediately after, otherwise some strange things could happen to the screen.

To flash cursor during a program:

```
C64 ON - POKE 204,0
      OFF - WAIT 207,1,1 : POKE 204,1

128 ON - POKE 2599,0
      OFF - POKE 2599,1
```

To check for the modifier keys; On a C64 PEEK (653) or on a 128 PEEK (211). The return values are 1 if SHIFT pressed, 2 if CBM pressed, 4 if CTRL pressed, 8 if ALT pressed (C128 users only).

To print characters in reverse; On a

C64 turn in on by POKE 199,1 and off by POKE 199,0. On a 128 turn on by POKE 244,1 and off by POKE 244,0

To change the print colour; C64: POKE 646, colour (0-15). C128: POKE241, colour (0-15 for 40 col) or (0-255 for 80 col).

To check whether the computer is a C64 or a C128 in 40 or 80 columns.

```
10 A=40 : IF FRE(1)+FRE(.) THEN 30
20 GRAPHIC CLR : IF RGR(.)=5 THEN A+80
```

To check the name of the last file loaded type SYS 62913

To check how many blocks are free on disk, type LOAD " \$\$ ",8

To make a new start without turning off the computer, type SYS 64738

Instead of using pokes to change the border and background colours, use this instead:

```
10 AD=49220 : FOR T = AD TO AD+18 :
READ D : CK = CK+D : POKE T, D : NEXT
20 IF CK <> 2525 THEN PRINT "ERROR IN
```

```
DATA" : END
30 PRINT CHR$(147) "TO USE, ENTER
SYS";AD;" , SCREEN, BORDER"
40 DATA 32, 253, 174, 32, 158, 183, 142, 33,
208, 32, 253, 174, 32, 158, 183, 142, 32,
208, 96
```

Non destructive \$

Have you ever loaded a BASIC program and then needed to check the disk's directory? Try this set of commands: POKE 44,144 then load the directory like normal and list it. To get back to your program, POKE 44,8. All this does is move the start of BASIC to 36865. Care must be taken with large programs and variable values from a program that has been RUN may be lost, but at least the program is still in memory.

Here's a program that plays audio tapes in your datasette (singing and all!). It was originally written by Darren Burkey and published in an English magazine called ZZAP! (OJ: The output is quite distorted, but AC/DC fans won't notice the difference)

```
10 PRINT"INSERT A TAPE AND PRESS
PLAY. HIT A KEY."
20 GET A$ : IF A$=""THEN 20
30 C=0 : FORL=49152 TO 49198
40 READ A : POKE L,A : C=C+A : NEXT
50 IF C<>5424 THEN PRINT "ERROR IN
DATA":END
60 SYS 49152
70 DATA 120,165,1,41,159,133,1,162,0,142,
17,208,138,157,0,212
80 DATA 232,224,24,208,248,160,15,162,0,
173,13,220,41,16,208,6
90 DATA 140,24,212,76,25,192,142,24,212
,238,32,208,76,25,192
```

Dodgy block numbers

To create files that appear to have a ridiculously high block number in the directory, save your file like this:

```
SAVE CHR$(0)+"filename",8
```

To the casual person, these files appear impossible to load. The only way to load them is with the CHR\$(0) added. This can be useful for a main program in

by Owen James

C: commodore

64

some game or whatever, which is loaded with autoboot.

To save an auto-run file, all that is needed is the inclusion of the line:

0 POKE 770,131 : POKE 771,164

to your program. Then you save it like this:

PRINT "[shift+clr/home]" : POKE 770,113 : POKE 771,168 : POKE 43,0 : POKE 44,3 : POKE 157, 0 : SAVE "filename",8

After the program has saved, the computer will lock up. Don't worry, it means that it worked. To test simply load and it should automatically run once it has finished.

MAIL



For Sale

John A Close of Buderim Qld writes;

"Dear Owen, For some years I used a Commodore C64 and I had a great many hours of use and enjoyment out of the machine. I have had an Amiga now for quite a while and have been slowly disposing of the C64 equipment that I had and on reading your articles, I thought that there might be some readers who would like one or other of the articles I have left. I would like to sell them and would do so quite cheaply.

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"Firstly there is a Z80A microprocessor cartridge with the relevant manuals, which according to the manuals opens up the C64 to 15,000 CP/M-based programmes and is really a whole second operating system on board when it is plugged into the port.

Then there is the book *Compute's Data File Handler*, which according to the blurb on the book is a sophisticated electronic database manager for the C64. It is really a machine code program set that is typed onto disk for use. A fair amount of work to type it in, but very useful when it is done.

"A C64 Business Software Program. This is a set of disks; a Debtors system, Invoicing and Sales analysis system, General ledger system and Creditors. I used this software in a small business and it is very good and is capable of producing everything from daily records to profit and loss/balance sheets. There is a book to accompany each disk.

"A set of books called 'Step-by-Step programming the Commodore 64 Graphics'; four books that provide programmes to type in for graphics of all kinds.

"The following books; Writing Strategy Games on the C64, The Working Commodore 64 (Programmes of all kinds that are particularly useful, such as programming tools, Secretarial, Accounting, Home use etc.), The Commodore 64 Disk Companion, Business Applications for the C64, Commodore 64 Computing, Commodore 64 Games. The manuals for *Superbase* and *Superscript* and *The Manager*. As well, there are two datasettes and two pair of joysticks. I hope that all of this proves to be of some use to someone."

OJ: Users interested in the items John has for sale should contact him directly by writing to 7 Farnwyn Ct, Buderim 4556, or by telephoning (074) 458 005.

Compilation?

R Haidar of Lurnea NSW writes;

"Dear Owen, Would you be able to compile all the articles from past issues of ACAR so people can buy it from you. It would be a great help to me and anyone else who owns a Commodore computer.

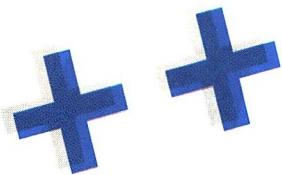
"The following message is to anyone who owns a Vic 20, C64 or C128. You can now join a new Commodore Club. There is no fee to pay, but just exchange information from one person to another. Whichever way you use your Commodore computer, you can get almost any type of information you want from hints and tips for games to advanced programming help. Write to R. Haidar, 62 Webster Rd, Lurnea NSW 2170 or by telephoning (02) 607 7192."

OJ: I've received many requests for compilations of back issues of The C64 Column. Next month I'll print some details on obtaining compilations of the past four years worth of columns. Watch this space.

That wraps up this edition of The C64 Column, which this month celebrated its fourth birthday. As always, I'd love to hear from you. Send your comments, questions and suggestions to me care of:

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or via Fido Netmail 3:713/888.999. □

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Letters TO THE EDITOR

Each month we will publish the most interesting letters we receive. Think of it as an open forum where you can view your opinions, share ideas or ask questions.

Around half a page is a good length. The contents may be edited for brevity, accuracy or legality. If you don't wish your name and suburb to appear, please say so at the end of your letter.

Department Store Dilemma

I am replying to the "Whinge Whinge" letter in the April ACAR, in which it stated that "places like Brashs and Myers get bulk stock of products that they know nothing about".

I would just like to say to the author of this letter that he should check his facts. I have been working in Myers and other large retail chains for years. We are trained in the use of Amigas, IBMs and Apples as well as network maintenance and installing just about every conceivable third party product on all systems. So please think again before going on about Brashs and Myer staff.

Also, in regard to getting stock, we have to wait just as long to get compu-

ter stock as any retailer does - that's right, even in department stores.

*Michael Harvey
Gold Coast, Qld*

Ed: We agree with you that department stores are certainly not bereft of people knowledgeable in computers, and some of them are actually working in the computer departments; it's great to know you're out there serving people properly.

However, for every user story we hear that's complimentary about the knowledge and expertise of chain store personnel, there are ten nightmare stories of people landed with machines not suited to their purposes who are driven to pestering smaller dealers with problems that the seller of the computer can't handle. The legendary teenager fresh from the loading dock is still, apparently, a regular sight behind the counter in the computer section.

More Music

Please

Just a short letter to express my opinions about your magazine in general. Each month I look forward in anticipation to reading the informative and entertaining articles in your pages.

Having said that, I must admit that I would like to see more emphasis placed on the Amiga's potential in other areas, namely music. As a registered user of

Bars and Pipes Professional and the *Patchmeister*, I would love to read more about this side of the Amiga. The Amiga can compete quite successfully against the likes of *Cubase* on other platforms, and at a substantially reduced price. I also believe products like the Sunrise and Toccato Sound boards would also be well worth reading about.

*Stephen Edwards
Panania, NSW*

Ed: Thanks for the support, Stephen. *Amiga Review's* continual improvement is driven by you, the readers; your vote has been counted!

Amiga Review does, of course, cover Amiga music software (Deluxe Music 2 most recently), but we haven't emphasised the professional end of the market. We'll look into it - perhaps a comparative review?

Sysinfo MMU



Disabled?

Firstly, I'd like to congratulate you on doing such a beautiful job in creating this magazine. Although I've only read two issues, I'm confident in saying that yours is the best Amiga magazine produced in Australia. Well done!

I have several questions. First, Nic Wilson's SysInfo program says that the 68851 Memory Management Unit in my A2500 is disabled. What caused this, and how do I make it work?

While composing this letter and doing the graphics, I was interrupted by two 80000004 guru messages. Why is this?

My 2500 hangs a lot. About four out of ten times it hangs on startup - it just doesn't boot, and leaves me with a blank screen. The machine sometimes hangs while performing everyday tasks, too, and if I put Workbench or *Final Writer* into 16 colour mode. What is wrong?!

After I optimise my Workbench partition with ReOrg 3.1, my Work partition always becomes "Not a DOS disk". How come?

How do I get into your BBS? I rang in once but I can't get in any more. Sometimes I get cut off when the sys-

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tem transfers from fax to modem? Why is this happening? Also, if I do dial into your BBS, can I upload my letters there?

If I want to fix my screen flicker in high res, do I need to get a flicker fixer and multiscan monitor? I heard somewhere that I don't need a flicker fixer if I have Workbench 2. Is this true?

Philip Hoosen
Sydney, NSW

Ed: The Memory Management Unit (MMU) isn't used by the vast bulk of software. Some specialised stuff uses it, like Enforcer (if you don't know what this does, you don't need it), and you need an MMU to use virtual memory packages like Gigamem, which let you use hard disk space as pretend RAM. If you're running a program that makes use of the MMU, it'll automatically enable it, and the MMU will show up as such in SysInfo. If you're not, it won't.

8000000x, where x represents some digit or other, is a failure usually produced by programs that don't agree very well with Workbench 2. We used to see it all the time while the kinks were being ironed out of applications; it's not so common now. If you're using an older word processor or paint program, that could explain the problems. Newer software shouldn't fail this way.

The random hangs sound like a RAM problem, since you can make them happen by doing certain software things. Since you're using a fairly elderly Amiga, it's not too improbable that some odd chip fault's arisen. We're afraid the only way to solve this problem is to throw money at it - and hope it's not a Magical Mystery Untraceable Fault.

Whatever's causing the hangs is probably also responsible for the ReOrg problem - which, by the way, is bizarre, since partitions should be completely separate even from the point of view of a low level optimiser like ReOrg.

The ACAR BBS used to work fine, but at the time of writing that phone line is being used as a workhorse general purpose fax and data line, without the BBS software connected. This explains the odd problems you've been having, since fragments of the old BBS paraphernalia are still hanging around.

Give us a ring on the voice line (02 879 7455) first and we can set up a simple session for you.

Indeed you do need a flicker fixer and multiscan monitor to get rid of interlace flicker. But Workbench 2 with at least an ECS (Enhanced Chip Set - the one prior to AGA) machine can let you use Productivity mode, which is a flicker free four colour mode which outputs at 31.5kHz, just like flicker fixer output.

You still need a suitable multiscan monitor, and anything that can't be coaxed onto a Productivity screen will still flicker, and you'll suffer a greatly reduced colour palette. If you can live with all these things then it's a good cheap way to get a stable high resolution display.

Blackout at



Black Knight

Last year I bought a Black Knight Peripherals S.A.M. SMPTE and MIDI interface from Computer Discounts. It doesn't work. It has never worked. When I bought it, I presumed it was not working because my system was too slow, but I now have an 030 A2000 and the grim truth is finally told - I paid \$300 for an inconveniently sized paperweight.

With the collapse of Computer Discounts, my warranty is out of the question. Is there any conceivable way of getting the thing repaired? If Black Knight Peripherals is defunct, is there at least a chance of getting a copy of the circuit specs so I can have someone suss out the problem?

Is there justice for the poor suffering musicians trying to cling to the hope that the Amiga is a credible MIDI workstation (we're the ones who don't have the cash for a souped up 4000 and a Sunrise AD516)?

Damian Allen
Wentworthville, NSW

Ed: To answer your questions in order: Presumably yes, though not cheaply. Try to track down the original designers - their names may appear in your documentation. Hunt around.

And secondly, not much chance at all. Absolutely none. So what else is new?

What not to do!



Congratulations on a fine Australian Amiga magazine. My continued subscription is a measure of how much I value the balanced, professional work your team produces.

I'm interested in the changes afoot at ACAR. Let me say, however, that the current style of your magazine is unique. I hope that whatever changes you decide upon, the magazine will retain its overall feel. Whatever you do, please don't follow the example of the European magazines with their billions of typefaces and strange layout. As for coverdisks, no I don't want them.

I was also interested to read the specs on the AAA chipset - how did you manage to type all those juicy details without salivating into your keyboards? I'm now crossing my fingers that Commodore does the job properly from the start, and that the mistakes of the A4000 are not repeated.

One last thing. I live in South Hedland, a long way from anywhere. The only thing that has kept me from purchasing a modem had been distance to the nearest BBS. I wouldn't dare log onto a board in Perth knowing I'm being charged STD rates. Is there a solution for country users, since there must be a lot.

Tim Polmear
South Hedland, WA

Ed: Thanks for the praise, Tim - and rest assured, we're not about to turn Amiga Review into a circus poster. The bizarre layout of Euro-game mags is certainly entertaining, but we don't think that's what you buy a magazine for; if you want visual stimulation, see a movie, magazines are for imparting information.

There are no plans for a coverdisk, although it is a continuing letter topic.

The Hot PD companion disks every couple of months fill the role quite well, and readers who don't want them needn't order them.

At present, Commodore are in the throes of restructuring, but all the indications at the time of writing are that the new improved Amiga company will be everything we always wanted. Of course, nothing is ever as good (or as bad) as it looks, but the future seems bright!

With regard to your modem problem, all we can suggest is calling at the off-peak times and using an off line mail reader or even a full point package to keep your online time to a minimum.

Look into the possibilities of reduced rate plans; pretending a BBS is one of your Family and Friends is not a bad idea!

Poor Press



Deserves Letters

Please encourage all your readers to flood the offices of the *Business Review Weekly* with complaints, after they recently printed the following statement in their review of the new Power Macintosh:

"There was nothing like the Macintosh interface on rival personal computers until two years ago, when Microsoft came up with Windows."

On a general note, I think *Amiga Review* is great, and so much better than overseas game based magazines; even your advertisements make interesting reading.

If any readers who are forced to deal with IBM compatible machines would like to educate their computer technicians, try this easy trick. I make simple loop animations with *DPaint 3*, and record them to video tape using an A520 RF modulator.

I then play them at work as advertisements (poor man's multimedia). The fact that such a simple thing could be done with an Amiga absolutely floored our N.C.R. technician, used to dealing with "real computers".

**Ian McDonald
North Bendigo, Vic**

Ed: The *Business Review Weekly* statement was wrong on two counts - ignoring the Amiga, and saying Win-

dows is only two years old, when every child knows that Windows 2.0, the first successful version of the interface, came out in 1986! 3.0 followed in 1990, for anyone interested.

A1200 users can record to video even more easily, since their machines have

both RF modulators and higher quality colour composite output built in - just plug it in and hit the record button! Compare that with the PC alternative - you can get PC to video adaptors, but they're about \$500 and don't even do overscan easily.

PC Comparisons



I take the teeniest exception to your reply to Trent Johnston in April's ACAR [in which we said that, as far as the raw performance numbers go, PCs look like better value than Amigas]. Using Trent's figures, the basic A1200 adds up to \$1550. The equivalent CPU on the other side is a 386DX; a quick look at the first such system I came across (from Rod Irving Electronics) reveals \$1650 for a 386 including monitor, \$150 for DOS and Windows and \$110 for a basic SoundBlaster - \$1910.

The latter package does include 4Mb RAM and a 200Mb hard drive; OK, put the systems side by side and look at what you can fit into them.

The five major productivity programs (including Windows) on a friend's 386 took up 75Mb of hard drive space; the equivalent programs on an Amiga take less than 12Mb. It's also reasonable to suggest that the mad drive thrashing caused by Windows' virtual memory system would cause the drive not to last as long.

To get multi-application performance in the same ballpark as the A1200, you'd need another 4Mb of RAM in the PC - say \$300. This takes us to \$2210 for the clone, roughly 50% more, still not quite as fast and we haven't started talking video yet.

I'm not knocking clones - each platform I've used has its good and bad points. I think it's too simplistic to apply only hardware or software arguments to platform comparisons. It should be looked at as what your average user gets for their buck.

**Lu Beranek
Highett, Vic**

Ed: This, Lu, is basically what we said in April. The 1200 offers the aver-

age user a more functional computer.

Your prices for IBMs, though, seem a little steep. Rod Irving (to use your example) are selling a 386DX/40 with all the stuff you mentioned and local bus video for \$2134, and it's only \$329 more for a 486DX/33 (the machine that's pretty much standard now); and, as always, this listed price is merely a way of starting a lively discussion about the true value of the system.

Windows programs are bigger for two reasons. One, Windows is, as you say, inefficient, in many respects grossly so; this grows out of the PC's primitive architecture, which lacks the Amiga's base of built-in libraries and hardware to handle the drudgery. Two, Windows programs are more capable. The Amiga has nothing like the current version of Microsoft Word for Windows, or ACT v2, or Lotus 123. Trust us on this one, we do a PC magazine too.

The question, though, is whether home users really need the vast power that monster applications give, and the answer is generally no. Most Word users never touch the vast bulk of the program. But it's still not fair to say that Amiga productivity applications are equivalent to their PC cousins, and the point still stands that in the benchmark department, which has little to do with a computer's real power but a lot to do with selling the things, PCs tend to look more impressive than Amigas.

Of course, we all know the reality is the Amiga is a far friendlier machine to use, offering the freedom of true multitasking. Furthermore, we still lay claim to software like Scala that will never be matched by current PC technology - just ask Scala about their PC version.

On Screen Q&A



Too expensive?



Why the hell does *Microcosm* for the CD32 cost \$129? This is ridiculous - I've seen it advertised in an English magazine for £30, with *Liberation* going for £35. I bought *Liberation* here for just \$69, and if the distributor of *Microcosm* thinks I'm going to fork out an extra \$60, they need their heads examined!

Michael Saunders
Salisbury, SA

Ed: Game pricing has been a bone of contention for years. Seemingly outrageous price increases are partly accounted for by shipping fees and similar expenses, but when a cheaper product ends up more expensive it's hard to justify. We've seen *Microcosm* advertised for \$100, but then again we've seen *Liberation* for \$60.

Since there's absolutely no legal reason not to charge as much as you please for a product, consumers can only vote with their wallets and buy from overseas; if enough people do it then the vendors will get the message.

Is it as good as DOOM?

My family has recently bought an Amiga 500 with 1Mb of RAM, I am 11 years old, and I am really interested in Amiga games.

I have seen a game called *Alcatraz* and I was wondering what it's about - do you know? If so, do you know if it's as good as *DOOM* and *Wolfenstein* for the IBM?

David Foy
Morphett Vale, SA

Ed: David warned us that we'd probably also be getting a letter from his 12 year old friend Luke Emrose; he was right!

Another World



I regularly purchase ACAR - I love it. Keep up the good work!

My family owns a 1Mb Amiga 500 with an Okimate 20 colour printer and external drive. I think the Amiga is absolutely terrific and I don't like any other computer except the Amiga.

I've seen *Wolfenstein* and *DOOM* on the IBM and I would like to know if there's a similar game on the Amiga. I have played *Robocop III* and it isn't as good.

I have the game *Another World* and can get past the slugs and the lion, but after that in the next level I always get killed. Would you be able to give me the full solution to it?

I have all the cheat codes and can finish it by skipping levels, but I'm bored with that and would like to finish it properly.

Luke Emrose
Morphett Vale, SA

Ed: It's basically impossible to make a game as visually and sonically impressive as *DOOM* and fit it all onto a 1Mb A500, or indeed any of the old Enhanced Chip Set machines. The Amiga's better graphic architecture means spectacular 3-D games with texture mapped walls and all that cool stuff can be done on the newer machines, but a 500 just isn't big

and fast enough - remember, it's basically 1985 technology.

DOOM, for instance, requires an IBM with a VGA card (256 colour graphics), at least 4Mb of RAM (preferably 8, for smooth running on the later levels), a fair slab of free hard disk space and a decent 80486 processor - it'll run with a 386, but not fast at all. An 020 or 030 Amiga 1200 or 4000 could make a reasonable fist of it, but a version for the earlier machines would have to use HAM graphics (ugly, slow) and come on about a million floppies (hell); in other words, forget it.

Anyone who can help Luke with his *Another World* problem should send the solution to the mag, although we'd like to point out that in our opinion finishing a game "properly" means figuring it out for yourself, not taking a walkthrough!

Star Trek



I was quite impressed when I saw *Star Trek - 25th Anniversary* on a friend's IBM, so when I saw the Amiga version on the shelves I bought it. It looked okay to start with - 256 colour AGA graphics just like the original - but when I started playing my opinion changed drastically.

This game has the lousiest mouse control I've ever seen. I don't know how they did it, but the people who converted *Star Trek* from the IBM seem to have added about ten tons to the mouse cursor - it moves slowly and reacts very sluggishly to me pushing the rodent. This is tricky enough in the adventure sequences, but it really sucks when I'm trying to shoot a Klingon battle cruiser! Where do these people get off?

Charles Reed
Miranda, NSW

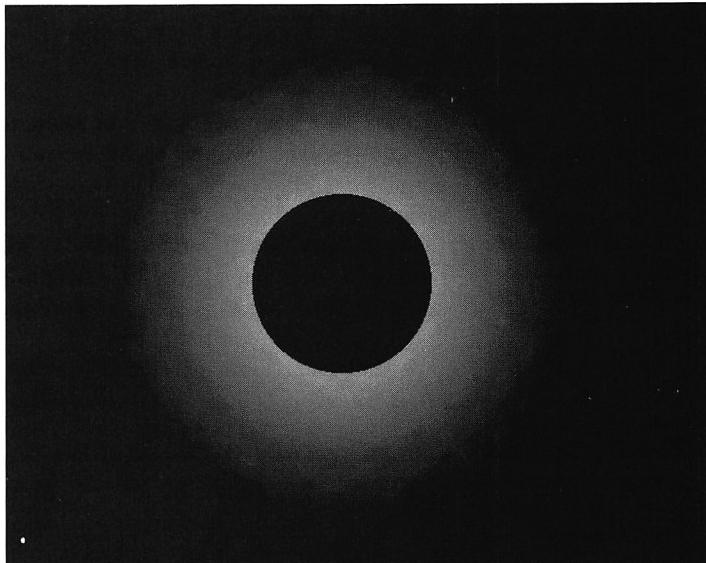
Ed: It used to be that Amiga users complained about IBM ports because the EGA graphics stank. Now the graphics are fine, but the converters are still doing budget jobs, including whatever bizarre roll-your-own mouse system they've put into *Star Trek*. The Amiga's got a hardware sprite for its mouse pointer and low level support for the thing; evidently integrating this into the game was too much trouble for the coders. □

Make your own Random Dot Stereograms

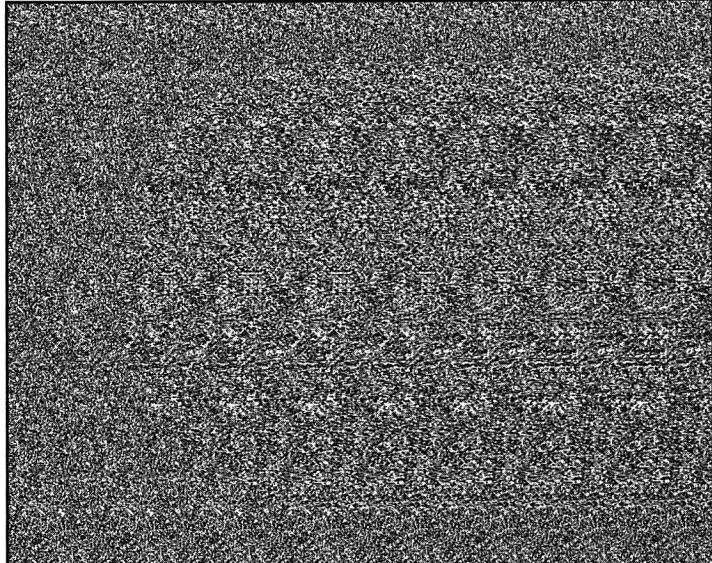
by Andrew Farrell

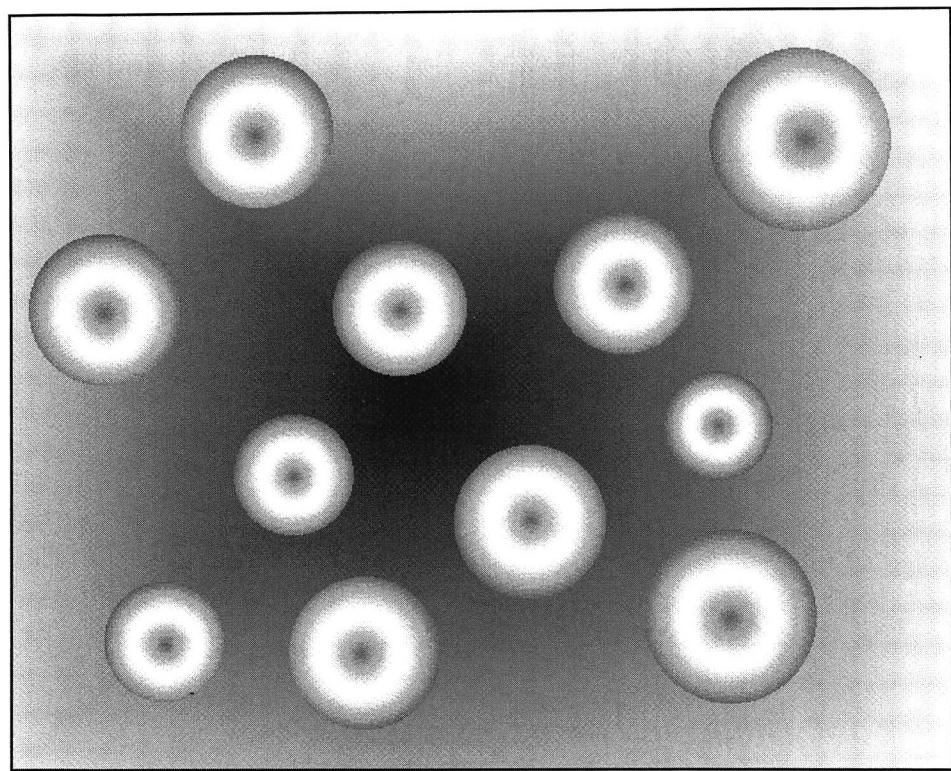
You can buy books filled with them. The Good Weekend magazine (inserted in the Sydney Morning Herald) recently featured them. Gallery owners frame them and proudly display them in the front window. To the casual observer they appear nothing more than fuzz, mush, garbage - a lot of dots.

Original

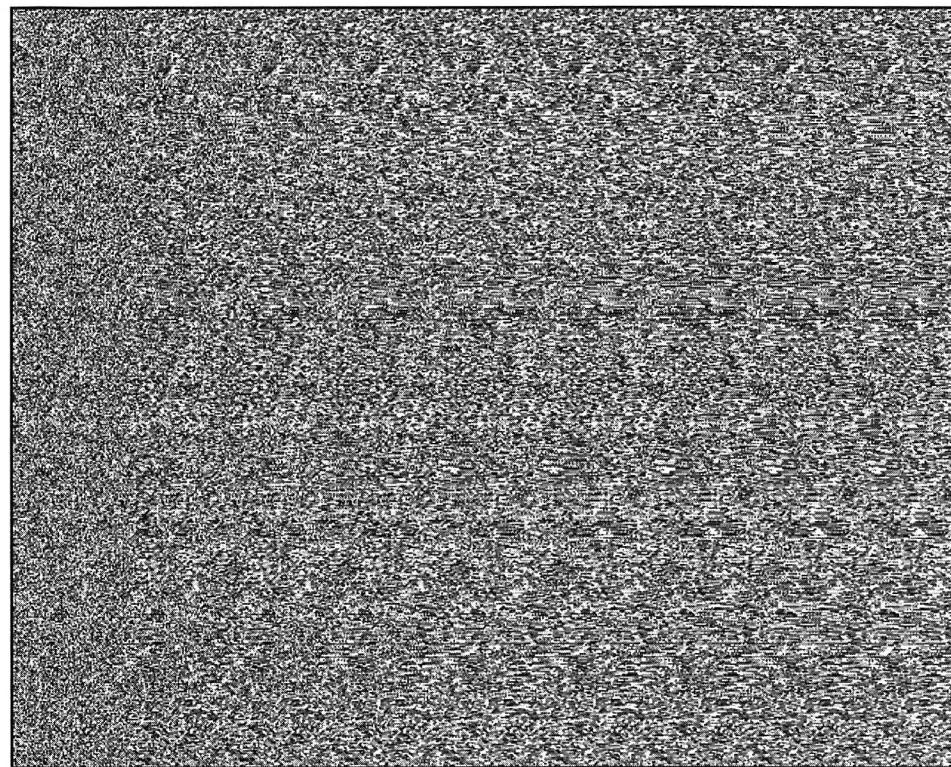


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Original



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In fact, to the trained eye, they are a visual feast. Now, thanks to a smart little program by Ben Charles Sutter, you can make your very own. There is even the possibility of creating animated versions for all to enjoy.

I'm talking about Random Dot Stereograms. When viewed properly, they appear to be an amazing 3D image, that looks like it goes into and out of your screen without any additional hardware, funny glasses or bizarre filters. However, you will need a little patience and the right technique. It's really worth the effort. Once you get the knack, they're dead easy every time.

A little background

A Random Dot Stereogram looks a lot like snow on a your television. By training your eye muscles to behave in a certain way, a 3D image will magically appear. Our eyes are focusing instruments, just like a camera lens, or the Hubble Telescope (except the Hubble can't see as far).

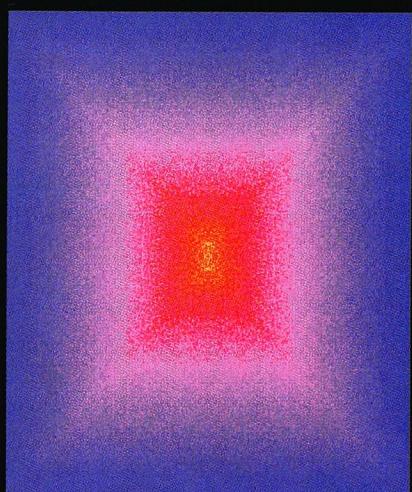
Try this: Stand on the footpath and look at your house, then hold your finger at eye level with your arm fully extended. Now, close one eye. You can focus your open eye so that your finger will be clear, but your house will be blurry. You can then make the house clear, and your finger will become blurry. This is called focus.

The way we perceive depth is by the angle between our eyes. In other words, the further an object is from you the closer the line of site of your eyes is to being parallel.

To see the stereogram, you need to angle your eyes as though you are looking at something twice as far away as the image on your monitor (or on this page). BUT, your eyes need to be focused at the surface of the paper, because when it comes right down to it, that is where the image actually is, on the paper.

It will take some practice. Your eye muscles aren't doing anything they haven't done before, you just need to train them to work slightly differently.

Some of you may have seen these SIRDS, as they are sometimes called, in magazines, or shopping centres, where



Original

there were two dots above the image. These can be a big help. Hold your finger behind the paper just above the dots. Slowly pull your finger away, keeping

your eyes focused on your finger, until the two dots turn into four dots and then the two middle dots merge into one, so you see three dots. Keep in mind that you



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must keep your eyes focused on your finger.

You will see the two, or three or four, dots in your peripheral vision. When you

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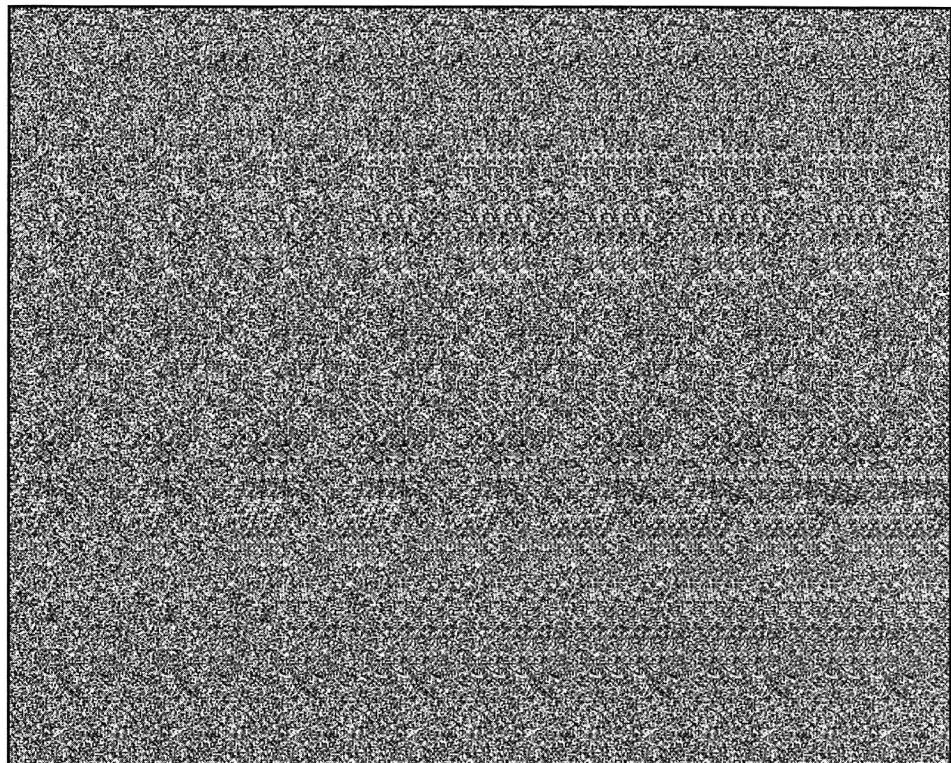


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Original

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have the three dots, you should see the 3D image in your peripheral vision. Then you can slowly move your eyes down the page to see the rest of the picture.

A note about the dots: If you look at the image, you will see a pattern repeating itself several times across the page. The space between the two dots corresponds to the width of the repeating pattern. In the pictures generated by *RDS*, this distance is always one eighth of the width of the picture.

Sometimes it's easier to see *RDS*'s images on paper. If you are having difficulty seeing those generated by the program, try printing them out on an A4 page. It helps some people to have the two dots at the top of the page. After some practice, you probably won't even need the dots.

The program

RDS runs fine on any Amiga. It's only a little program - 2836 bytes in total. Its job is simple - convert your carefully prepared image into a random dot stereogram. By viewing the originals you'll see how the different colours are converted into apparent depth by the program. You need to plan your original well, and avoid anything too complex.

RDS is written in 100% assembly language for a few good reasons. First, the small code size, and speedy execution. Secondly, according to the author it was a challenge. It is just this sort of thing that generates great freeware programs - people trying out new ideas and achieving something useful.

Where to get it

RDS is Freeware, so copies are bound to be around the traps - BBS's, user groups and the like.

However, you can also get it on the Prime Artifax Winter Warmers pack - a four disk compilation selling for \$19.95 including postage. It's guaranteed to entertain you during those wet weekends with all the latest new freeware and shareware games, utilities and neat programs to tinker with.

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It is not often I can say this, but *Skidmarks* is a game worth calling in sick for. It was written by a bunch of guys in New Zealand who have come up with one of the most enjoyable games I have played in many a long year. Okay, they can't spell Porsche and okay, no car has ever put up with the pounding that your car gets. And no race circuit was ever constructed like this. None of which matters in the slightest.

In the simplest form you are racing your car against three others around a circuit and your car will go every way but straight. You are the green car. Apply the throttle and you think you are being overtaken by another green car. Not so, matey. That is your rear end skidding around and before you know where you are you are going backwards into the banking, bouncing off forwards into the blue car and skidding helplessly sideways.

To even stay on the track you have to control the throttle with the delicacy of a master cracksman feeling his way with a

tumbler lock. And, to add a certain spice, there is a mound in the track which you might care to think of as a speed bump, and unless you hit it straight with your wheels pointing strictly forward you will come down sideways and spin around and around in a high speed waltz.

For your first few goes forget about trying to win. You have absolutely no chance. Let the other cars move a little head and then concentrate as much as you can on keeping on the track. After a few goes, when you have gone round backwards, sideways, frontwards and diagonally - frequently all at the same time - you will get to the stage where you can get around the first, simple, track only hitting the walls four or five times. Now you start to catch up with the third car which hangs at the back. This is a fatal error of judgement because it is magnetically attracted to you and smacks you smartly and off you go spinning your way to perdition.

If you are truly daft you can leap from

the beginner's track to the most complex. Here after two laps you come around the corner with nothing on the clock but the maker's name and there coming towards you at top speed is the whole racing pack, which appears to have taken a different course. You slide 180 degrees and try to drive ahead of them. Lots of luck, Charlie.

I have no idea why this game is so enjoyable and so addictive. I know that we have already had serious squabbles about whose turn it is to play.

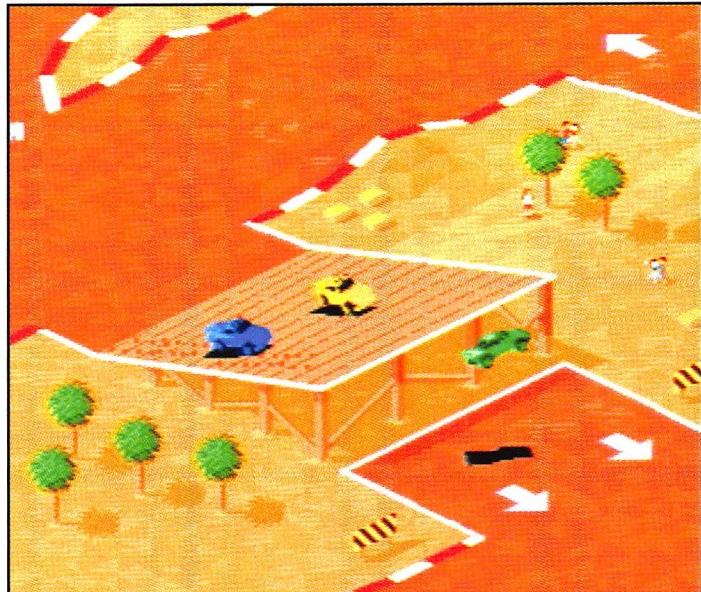
Once we have mastered the basics we are heading for the big time. That is to link two or more computers together by modem and then race against each other. My guess is that it will all end in tears before tea time, but we will have one load of fun until eventually we all slide off the track. If this is the quality of game we can expect from New Zealand they have a buoyant future ahead.

GARETH POWELL

Ratings:

Graphics	85%
Sound	80%
Gameplay	90%
Overall	88%

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APOCALYPSE

Eleven years ago the game of the moment was *ChopLifter*. This was a smashing game and gave many hours of innocent pleasure. In it you flew a helicopter into enemy territory and rescued prisoners of war from the naughty persons on the other side. When you landed to collect them the prisoners ran out and they were easily distinguishable because they were dressed in white.

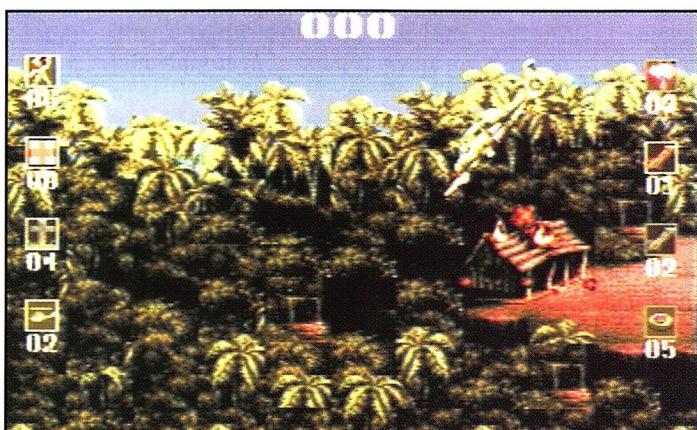
The enemy was dressed in green and you could zap them as much as you liked because you were flying the Sikorsky Jolly Green Giant mounted with two machine-guns.

The only problem was that the un-named enemy had tanks and anti-aircraft batteries and would try and shoot you down as you flew on your mission. Or, worse, get you when you were on the ground and loading the escaped prisoners.

In those early simplistic times such a game had little scenery and, in truth, you flew over a flat terrain. But, nevertheless, it was one of the classic games and is well and fondly remembered by older gamesters like Phil Campbell and myself.

Apocalypse is *Choplifter* brought up to

date. Much has been added. The scenery is now three dimensional, the troops arrayed against you are better armed. There are



quence which is not needed. This suggests that information regarding the prisoners has been discovered through interrogation and there are nasty noises in the background which may have been jungle animals - and may not.

Apocalypse is wondrously enjoyable and the new graphics, the new enemies and the added extras to the game make it well worth while. I can give it a strong recommendation.

GARETH POWELL

enemy helicopters.

But the essentials remain the same.

In a sense this game plays on the old MIA mystique which has many Americans believing that there are still thousands of American prisoners of war deep in Vietnam, Cambodia and Laos. There are not but the belief lingers on.

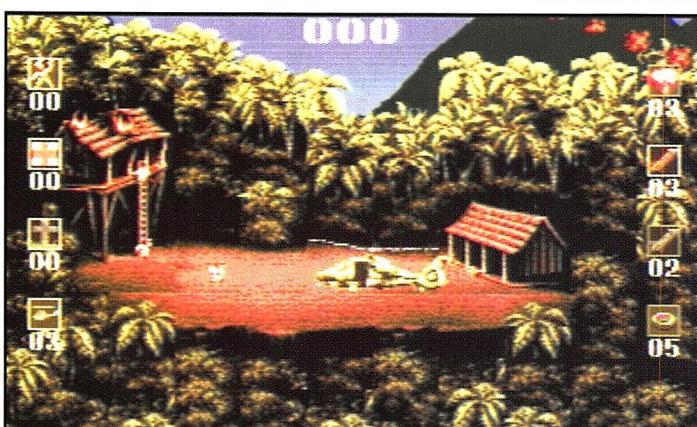
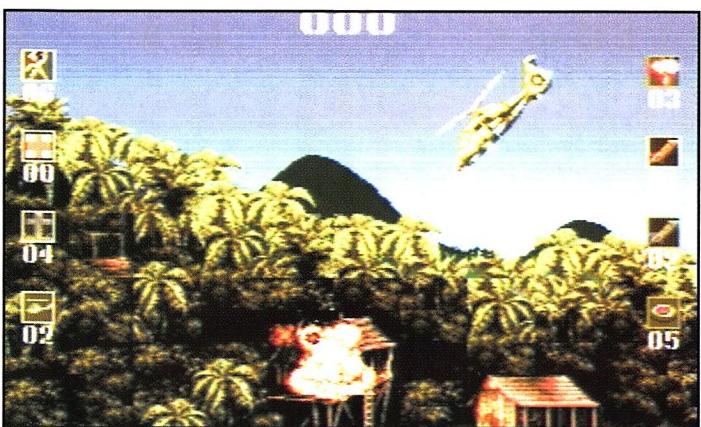
In this case *Apocalypse* calls the country Majipoor, but looking at the scenery it is definitely somewhere in South East Asia.

One complaint. There is an opening se-

Ratings:

Graphics	80%
Sound	75%
Gameplay	85%
Overall	80%

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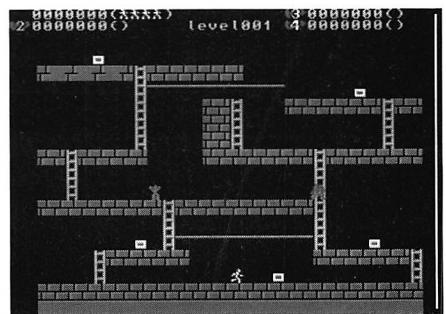
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AGA Demo #2

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Adams, Douglas	Hitchiker's Guide to The Galaxy, The	Guild Publishing	1986
Baum, L. Frank	Wizard of Oz, The	Mandarin Publishers Limited	1993
Berestford, Dick	Uncensored Boy's Own, The	Macdonald & Co (Publishers) Ltd	1990
Boardman, Tom Jr	Science Fiction Stories	Octopus Books Limited	1983
Burnett, Frances Hodgson	Secret Garden, The	Octopus Books Limited	1983
Carroll, Lewis	Alice's Adventures In Wonderland	Octopus Books Limited	1981
Clarke, Arthur C	2010 Odyssey Two	Granada Publishing Limited	1992
Clarke, Arthur C	2061 Odyssey Three	Grafton Books	1989
Crichton, Michael	Jurassic Park	Randon House	1991
Davis, Jim	Garfield: Here's Looking at You	Ravette Books Limited	1985
Davis, Jim	Garfield: Life And Leisure	Ravette Books Limited	1986
Davis, Jim	Garfield: We Love You Too	Ravette Books Limited	1985
Devine Sir Arthur Conan	Irrest Wind, The	Hawkins Publishing	1986

Database II

A collection of simple to use database programs for maintaining all sorts of lists - from catalogues to clients. Flexer - pictured above - is one of the new programs included on release II of the database compilation. Flexer's form-like display makes it ideal for beginners, and powerful enough for advanced users.

Workbench 2.x and
3.0 Screen Blanker

SUPER DARK

SuperDark 2.1 NEW

The ultimate screen blunker - complete with various modules offering a wide variety of blanking activities - highly configurable.

Designed to avoid burn-in of static monitor images. Requires Workbench 2.x or better.

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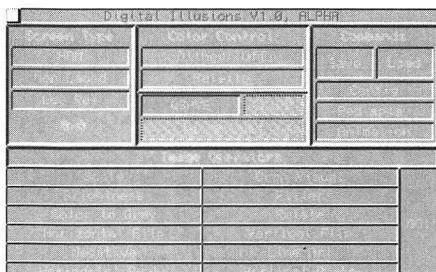
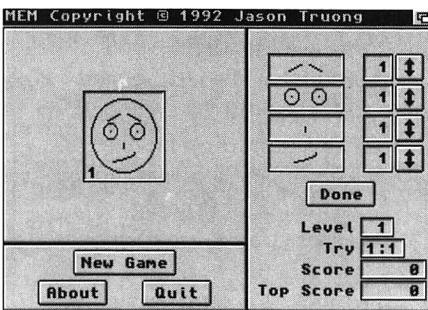
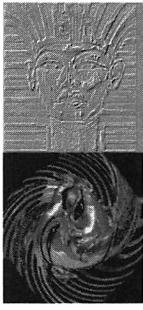


Image Processing

Digital Illusions is fully functional and allows impress image processing and animation functions to be executed on IFF images. Powerful AdPro style interface. One disk. (HAMLAB demo inc. too)



Education #5

We now have a total of six disks of education software. Mem (a memory game - picture above) is from education #5 - one of five programs on the disk. Others include Maths Adventure, Division, Counting and Lemonade. Education 6 has an excellent puzzle game called OXYD.

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Workbench 3.0

NEW NEW NEW NEW NEW

Enhancer

WB3.0 Enhancer NEW

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Amiga 1200 Make It Work

Having trouble getting programs to run on your new A1200? This disk gives you a number of options to dramatically improve compatibility. Simply run it first before trying the program in question.

MagicWB - Ideal for A1200

Revamp your Workbench - new icons and backdrops - slick, clean look - needs 8 colour, hires-laced display ideal for A1200 or A4000 owners with 1940 or better monitor. WB2.x or better required.

OT GAMES DISKS

#1 - AirAce, Missile Command (Atari style), Care Race, Downhill Racer (skiing)
#2 - BlackJack, Metro (Trains), China Challenge, Klondike (21)
#3 - Hate (3D Perspective shoot 'em), Megaball (break-out style game)
#4 - Galaxian, Pacman, Space Invaders and Asteroid look-a-likes - the classics!
#5 - Imperium, Mech Fight, SCombat
#6 - Chute!, Defender, Pharaoh's Curse, SkyFight, SpaceWar
#7 - Amiga Taxx, Cave Runner, Fire, Bally III, Llamatron, Bebess-O-Matic
#8 - Asteroids, Bug Blaster, Microbe, Reinc, Revenge of the Mutant Amelians, Ring War, Trix
#9 - Pacman (brilliant copy of the original), OmegaRace, Columns, Pebula and POD.
#10 - Donkey Kong, Galaga (the best!), Artillerus, Fleuch
#11 - Scorched Tanks - the latest super version, 2-4 players.
Adventure 1 - Island of Nephon, rescue & Jungle, Zut Alors! and treasure island. Some text based. Star Trek - The Game, with sound-FX, animation, point and click interface, various missions. 1Mb Balance of Power - Strategy game for one or two players. Control the intergalactic powers to avoid nuclear war. UChess - Chess game - Needs 4Mb RAM and accelerator - Ideal for A1200 or 1000. AGA Support.

some Office
CAD - Five Programs: Speaker and Circuit Design, Landscape & Architectural

- Database - Hyperbase, HyperDialer, DataEasy, Home Manager, bBaseL
- Forms Designer - Text based forms editor.
- Genealogy 1 - A-Gene and Family History
- Genealogy 2 - Arjay - Up to 1000 people, WB2.x/1Mb required.
- Home Budget - Assorted home finance programs.
- Home Tools - TouchTyping, simple database, Furniture Helper, Resume Maker, VCR Database, Diet Aid and LP Database.
- Spreadsheets - Easy to use SCalc, SPREAD and EasyCalc
- Finance - BankN, Your Money, Budget and Checkbook
- Text Editors - Az, UEdit, QED, DME + Text Editors Guide
- Wordprocessing - Text Plus, AmigaFOX, Liner, SuperRetLab, GWPRint & Print Studio
- Protect 4.3 - Includes spell checker, word count, footnotes, anagrams - hundreds more features. Text only - no graphics.
- Bowling - Keep track of bowling scores. 1Mb required.
- Communications
- NCOMM 3.0 - Shareware AREXX, SCRIFTing, simple BBS mode.
- Term 3.4 - Freeware, scripting, powerful, 3 disks, hard drive req. WB2.x required.
- Fonts
- CG-Font Pack 1 - Suitable for Workbench 2.x and above, Final Copy, Professional Page, PageSetter III. 60 different Compugraphic fonts. 6 disk set.
- Bit-Mapped Font Pack 1 - Suitable

for Worbench 1.3. Over 40 different fonts, ready to use directly from floppy - ideal for Deluxe Paint and most paint programs. 6 Disk Set.

Clip Art

- Clip Art Pack 1 - A selection of black and white, bitmapped clips, suitable for wordprocessing and desktop publishing. Three disk set - \$13.50
- Structured Clip 1 - Assorted ProDraw format clip-art.

Desktop Publishing

- Pagestream Enhancer - requires Pagestream 2.x or better. New drivers, Postscript utilities and more.
- Professional Page Enhancer - requires PPage 3.x or better. Lots of great genres for smart borders, copying pages, group, special effects.
- PoetSetter 1.2 - Entry level desktop publishing program.

Cartoons (Require 1Mb FREE)

- Cartoon 1: Batman, Shuttlecock, Stealthy
- Cartoon 2: Amy Vs Walker
- Cartoon 3: Jugette, Jugette 2, Juggler 2
- Cartoon 4: F16 Combat, Stealthy Manver II
- Cartoon 5: Bigs Bunny
- Big Cartoons (Require 3Mb)
- Big Cartoon 1: Anti-Lemmings
- Big Cartoon 2: Coyote
- Big Cartoon 3: Pogo
- Big Cartoon 4: The Dating Game (2 disks)
- Big Cartoon 5: Unsporting
- Big Cartoon 6: Enterprise Docking
- Big Cartoon 7: Bait-Masking

Education

- Education 1 - Elements, Draw Map, Rubik, Space Log, Gears
- Education 2 - Gravity Well, Planets, Life Cycles, Orbit, Enigmas, ZPlot
- Education 3 - Word Puzzle, Crossword, Word Game, A-Solve, POWER LOGO!
- Education 4 - PlotMap - Two disk set - creates maps of world, save in IFF format.
- Hypertext - Create text files with links to animation, graphics, sounds, songs - anything (via AREXX). 1Mb & WB2.x required.
- Stockmarket Simulation - Buy and sell shares, take out a bank overdraft, and eventually qualify to join the insiders club. Local program to simulate local conditions.
- Chemistry - Create 3D models of different molecules

Emulation

- Atari Emulator - German Only
- MS-DOS Emulator - PC-TASK (shareware-no write to disk) & Transformer. Run most MS-DOS business software.
- C64 Emulator - Run C64 Program, Interface C64 Peripherals (opt. interface available from U.S.A. Only)

Graphics and Animation

- Graphics 1 - Still Store: For sequencing stills for video production
- Graphics 2 - Mostra, ImageLab, TitleGen, sMovie, Abridge, SceneGen Demo, SlideMaster
- Graphics 3 - Icon-Editor, Turbo Title, Cyro-Animation Utils
- Graphics 4 - FreePaint, Graffiti, PED, PicBase - IFD Database
- MandleBrot Tools - Six Disks, Create

amazing shapes and patterns!

- MiniMorph - Create your own 16 grey-scale morphs. 1Mb
- AGA Demos 1 - HOIS-AGA and AGA - Amiga Boing.
- Mobile! - By Spaceballs - 3D Animation, A1200 and 3000 compatible.
- AGA Images - Six disks of hot AGA piccies including 3D rendered in Aladdin, and photos.
- Imagine Objects 1 - Enterprise, Chess Pieces, Amiga 3000.

Music and Sound

- Med 3.1 - The best Amiga low-level sequencer - some MIDI support
- Sound Tools - Play, edit, arrange, distort and create IFF sound samples
- Sound FX 1 - Filled with short, sweet sound samples - Bells, Horns, Dogs..
- Remix 1 - Two remixed music samples - Madonna and Black Box
- Tracks 1 - 1733, Aggression, Angles, Arkenoid, Atmospheric, AxelF, Azeirev
- Tracks 2 - Beat, Benny, Biochali, Biochali2, Blue Days, Blue Moon, Boss, Call Me, T.C.S.
- Tracks 3 - Cloud Song, Creation 2, Crockets, Ear, Electric Dreams, Last Ninja II, Megaforce, Metal Synth
- Tracks 4 - Oxygen, Piano-Plink, PopCorn, RSI-Hard, Skylight, Smoke, SuperBASIC, Tocatta
- Tracks 5 - Batt Dance, Bond, Fresh House, Lamada, Pawlf, WasteLand
- Movie Samples - 9 Disks of IFF "Make My Day" style samples (Tracks 6-23 also available now.)

Improve Your Workbench

- AGA Utilities 1 - AGA Anim players, picture showers, AGA disable, GIF

shower and more.

- WB1.3 SuperDisk - Bootable, ready-to-run. Read/Write MS-DOS disks, DIRWORK file manager, AutoCLI WB Enhancer, includes Documentation on disk.
- WB2.x Enhancer - Icons, Presents, NAG program for appointments, Fractal Screen Blanker, KCommodity: Auto window activation, Clock/Memory usage, Keystroke Audible Click, Gadgetless window closing, Hotkey, Mouse accelerator and much more.
- AntiVirus - Latest protection using BOOTX, Tutorial on Virus Protection and more
- Hacker - Rip music from games, create custom boot blocks, look for secret messages on disks
- DOS Utilities III - All the latest PD Utilities to organise your disks
- MS-DOS Utilities - READ/WRITE and FORMAT 720K MS-DOS Disks!
- Hard Disk Utilities 1 - HD Backup, Alock security, Undelete, Disk editor, mark out bad blocks, after your boot logo, find misplaced files and HDMem.
- Parbench - Network two Amigas via a special Parallel cable. Ideal for CDTV owners to use as a CD-ROM drive.

Programming

- ACE AmigaBASIC Compiler 1.1 - Speed up your BASIC programs into fast executable binary. Includes linker and assembler.
- Pascal - Two disks, PASCAL includes PCQ compiler, A68K, Blink, Debugger, Mon, examples and PCQ source.

Hot Games 11 Two player fun!

- Scorched Tanks - a classic action/strategy game for 2-4 players.
- TNG - Star Trek strategy game with Next Generation scenarios.

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There is a tendency to cash in on any passing trend. Hence *Cliffhanger* which is associated with the movie of the same name which stars the king of beefcake Sylvester Stallone. There is, of course, nothing wrong with such tie-ins provided they are elegantly executed and the game involved has intrinsic worth.

Cliffhanger from Spidersoft looks the part. It starts with the improbable scenario of one civilian jet liner shooting down another, and terrorists pretending they are stranded and helpless and awaiting rescue.

Having set the scene one expects the game to evolve with some breathtaking moments climbing sheer cliff walls with carabiners, pitons, ice hammers and the whole shebang. If, at the same time, we have terrorists, similarly equipped coming down the rock face to do us a mischief with ice axes it would not be unexpected. That is the sort of movie that Sylvester Stallone stars in.

What we get instead is what I think of as a modified bouncing game. You bounce around objects, out of danger, over precipices, along tightropes over fire, along bridges. Again, nothing wrong with that. *Sonic the Hedgehog* shows how well bouncing games can work.

But in the case of *Cliffhanger* the bouncing seems to be unconnected with the plot. You are the hero, off to rescue the victims of an air crash.

You pick up a bag of money and then you are attacked by an animal. We are a

little divided in our opinion here. I see it as a Labrador, but the manual says it's a wolf. You punch it in because if you do not you are dead.

Next you are attacked by a golden eagle which is, as we all know, a protected species. There are hundreds of them in this game and you must, again, zap them before they zap you.

The first obstacle is a cliff and you do not climb it. No, you stand on the very edge with your toes overhanging the precipice and essay an almighty standing jump which takes you to the pillar. It is then a jump again across another crevasse.

And on it goes with rocks falling on you and thermal spots singeing you and war on the mountain top when you finally reach the terrorists. It is a bit like *Jill of the Jungle* but you are expected to pay for it. Me, I pass. I didn't finish this game possibly because the reality did not live up to the promise.

GARETH POWELL



Ratings:

Graphics	65%
Sound	55%
Gameplay	60%
Overall	63%

Available from:
Hotpoint (02) 634 6499
RRP \$69.95



Dungeon Master was the first of many games to let you tramp through a three dimensional labyrinth, slicing up bad guys and solving puzzles along the way. *Captive* took the format into a sci-fi scenario, in which you were controlling four droids with a remote computer.

Now there's *Liberation - Captive II*, which has you dusting off the old droids to help you free a sequence of captives, people imprisoned by the powers that be in order to cover up defective law enforcement droids. These supposed servants and protectors occasionally decide that the best way to prevent crime is to make all potential perpetrators good and dead, an effective but somewhat unpopular strategy, and anyone that finds out about it is safely bundled off into a hard to reach cell, from which they can only be rescued by, wait for it, you and your plastic pals.

You control the droids in a quite intuitive manner, with all functions accessible with the mouse, and the keyboard available for movement as well. You can look in directions without moving there, turn a different way to the way you're moving, and operate things easily with combinations of left and right mouse button. Nobody's ever going to make a completely painless interface until we get virtual reality working properly, but this is pretty close, with some remarkably sensible touches.

Backpacks, for example. *Dungeon Master* type games often suffered from the unrealistic touch of a pack with x many locations, which can hold an apple, a broadsword or the bones of a colleague, without any change in the rest of the pack's behaviour. *Liberation* discards that idea,

Liberation

- Captive II

and instead has all the objects distributed on a square area that represents your pack; in order to put an object in or out, you click on it and drag, which pushes other objects around. If you can't find a space big enough for the object (sensibly, small things like pass keys need only small spaces, while something like a big gun needs a lot more), you can't put it in the pack; if you can't find a clear path to the edge of the pack area, you can't take an object out. I really, REALLY like this system.

The world is displayed as texture-mapped three dimensional vectors, and so are its other inhabitants, humanoid and vehicular. It's blocky but atmospheric, and everything makes sense. You're just a few lousy droids, so nobody gives much of a cuss about you; walk on the road and you'll likely get hit by a car, give someone lip and they'll call the cops.

Conversations are by means of a quite slick multiple choice system, and people behave at least slightly intelligently; if

you just break off a conversation and wander away without saying goodbye, they may get offended. They still exhibit the dead giveaway adventure game symptom of saying the same lines every time you meet them, though.

Wandering hawkers are a great way to get gear, from drugs to technology to implements of destruction (of which there are many, from swords to assault weapons). Amusingly, they also stock silly things like collections of girlie magazines. Oddly, though, you can't just blow them away and grab all their gear; killing them's easy enough, but there's never anything much left. This is necessary to stop Rambo getting too successful, but it's still inconsistent.

Speaking of death dealing, combat is simple too. You have keyboard control of the guns of two of your droids (with the Delete and Help keys, a feature not mentioned in the manual), but the other two need to have their status panels right-clicked to make them shoot, or hack, at



close range. This is not a big deal, since indulging in protracted shoot-outs is seldom a wise tactic - it attracts cops and other undesirables, and they don't believe in diplomatic solutions.

Liberation comes in one version for both ECS and AGA machines, and automatically adjusts - but you need at least 1.3Mb of free RAM. You can run it from floppy if you want, but running from hard drive on an AGA machine is the way to go (that's right - *Liberation* IS hard drive installable!). The built in graphics can be extensively dressed up if you're using a hard drive, by re-mapping the wall graphics for a richer environment. At its most opulent, this re-mapping can take more than 11Mb, and it shows.

Sound is good, too; nice music, good effects. The intro is very tasty, considering the game comes on only five disks. Overall, *Liberation*'s good looks, easy accessibility and infinite complexity (it generates a new world for you to explore every time, and you can adjust difficulty and action/strategy balance) make it an easy pick as a Recommended Buy.

DANIEL RUTTER

Ratings:

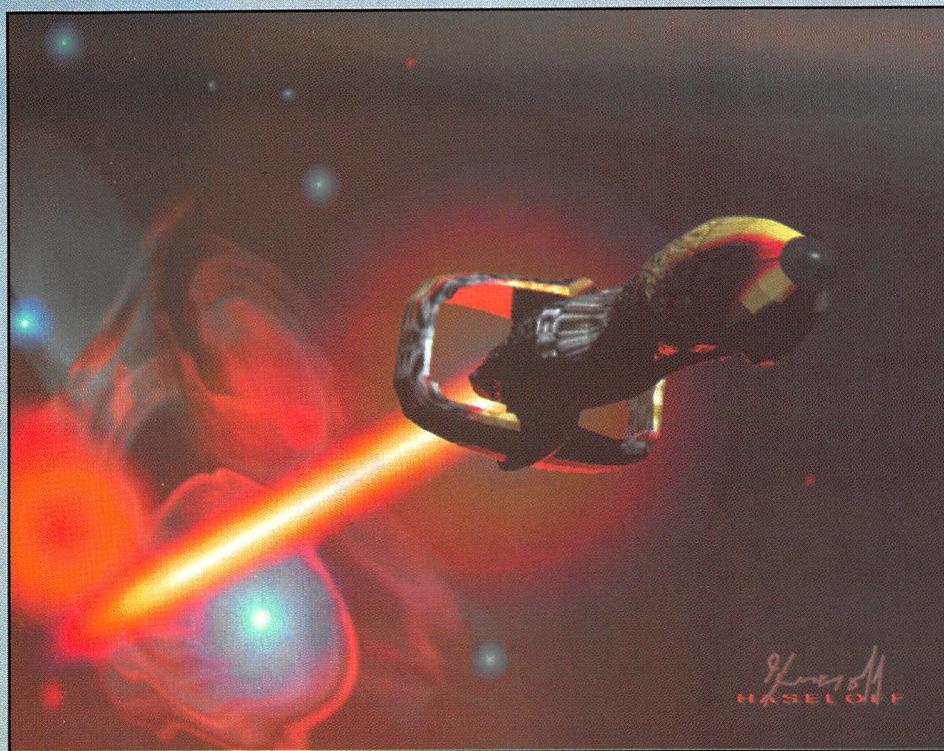
Graphics	90%
Sound	80%
Gameplay	95%
Overall	95%
Compatibility	A1200/4000 CD32

Distributed by:
Playcorp (03) 329 2999
RRP \$79.95

CD32 distributed by:
Hotpoint (02) 634 6499
RRP \$69.95



Amiga ART



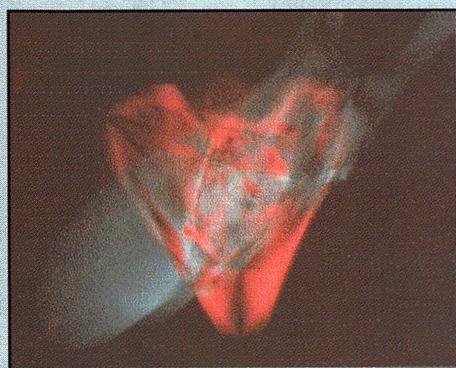
SPACE by Bernard Haseloff



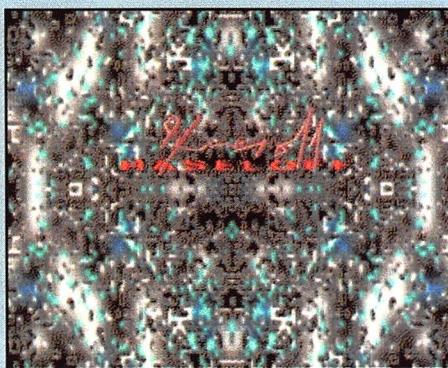
Nebula - The image backdrop



The ship's front colour brushmap



The basic components of the nebula



The ship's altitude map

THE SHIP - The central structure of the ship was created using the Forms Editor of Imagine Two. A half sphere was added to the front to give a more pleasing rounded effect. - The ships "wings" were more complex in terms of the number of procedures that they went through. Firstly a quarter of the form was created using a flat semi-circle and the extrude function of the Detail Editor. This was then squashed using the scale function and then joined to a mirror image of itself. Further detail and structure was added in the Pick Points mode and the whole thing was mirrored again. - The ship exists as a group object as it has been split into several sections each with their own brushmaps.

THE NEBULA - The basics of the nebula were created in the detail editor of Imagine using planes which were twisted and distorted through using a variety techniques (i.e. conform to cylinder, path etc., scale, and magnetism. - These were rendered as intersecting fog objects - 1 red and 1 blue. - The resulting image was stirred and warped in Morphplus using the Ripple and Twirl functions mostly but was completed by altering the perspective view.

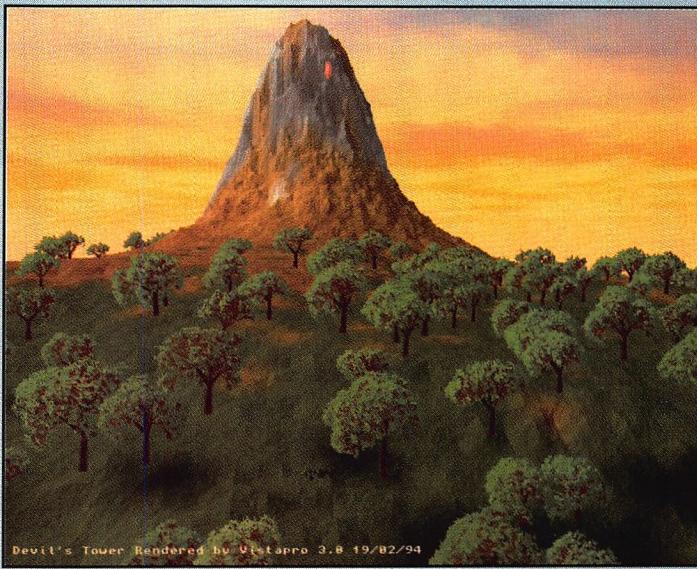
THE BRUSH MAPS - The spaceship's colour maps were produced from a check image manipulated in Morphplus and blended with a commercially available brushmap - "Flasme" from Textiles. - The altitude map was hand drawn and then tiled using Opal Paint.

THE COMPOSITION - The placement of the ship was discovered by creating a basic animation of the ship rotated through the x, y and z axii (?). As the nebula was already complete the pose for the ship was chosen based on the structure of the nebula with the lighting placed according to the light directions and colours of the nebula image. - The final image was cut and pasted in Opal Paint which allowed me to add extra glow effects, stars and the engine flame.

GALLERY



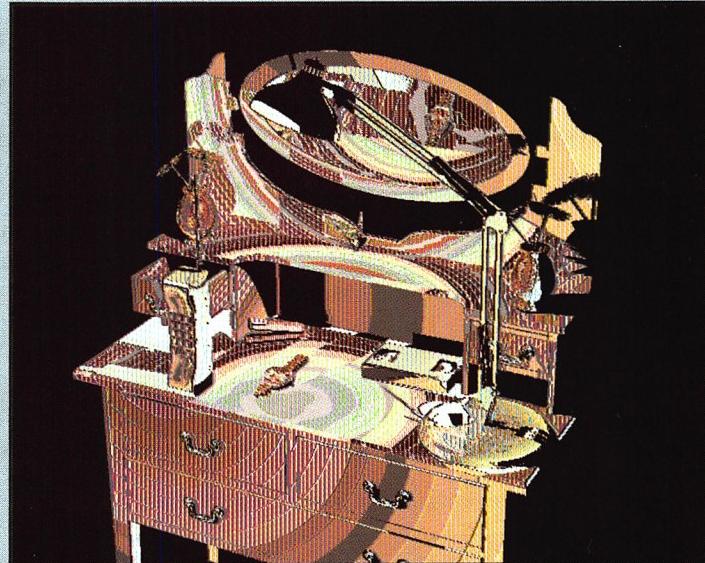
↑ PAMELA HANSON - 640x512 256 Colours



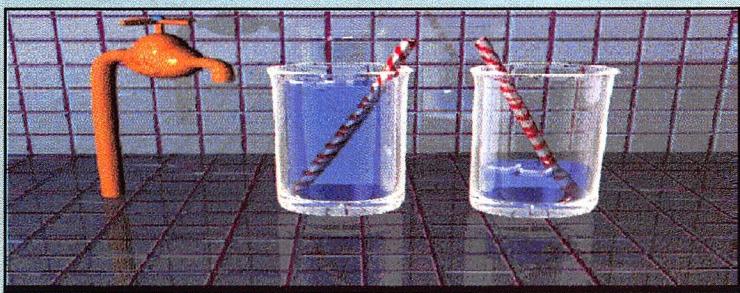
↑ DEVIL'S TOWER Rendered by Vistapro 3.0 640x512 ↑



↑ TV SCENE Rendered by Deluxe Paint 640x512.



DRESSER 640x512 256 Colours. ↑



← WATER by Craig Delahoy
JPG image 736 x 286 Image rendered using Real 3D v2.4.



Legacy of Sorasil starts with a nasty thunderstorm and the flames come up to make the title. Lovely graphics. Then come the credits and we quickly realise that this game was written in Britain for the European Common Market because you can choose one of three languages.

Legacy of Sorasil is an epic fantasy adventure with nine scenarios. These are not separate adventures, but all part of a single campaign, to free the lands of Rhia from the grip of evil.

This is a floppy disk game, not CD-Rom, and is neatly compressed onto three disks. My way of dealing with this is to boot off disk one which has the introduction and all the music and graphics, and then keep disk two in drive one and disk three in drive two which means there is a minimum of disk swapping.

First select your character - in this case four characters for you are setting up a small private army.

In sexist mode I ignore the charms of Calorflame, the Cleric. I also spurn the attractions of Celeste the Mystic.

What I want is hard case warriors.

Thus I choose Angor the Barbarian, Ravenslock the Wizard, Grimbeard the Fighter, and Stormbow the Adventurer.

You want to go up against this little lot? Lots of luck, Charlie.

Now that your band of warriors for the working day is assembled you are ready to move forward. The map shows that you are where the flags are flying and a flashing icon shows the first destination on your epic trip.

In this first scenario our destination is the Barrow Mound of Yaserat. You have your instructions: "To reach the island of Rin and Ironwood forest you must cross the Shadow mountains ... you must tread the path through the Valley of Sorrow ... where lies the Tomb of Yeserat, an infamous vampire-king of legend." This gives you the general flavour of what is about to happen.

On the screen comes a reasonable set of graphics showing our band of warriors - we few, we happy few - ready for the start of the great adventure. There is a set of icons which can keep you up-to-date with where you stand and your strength and potential.

You can start by looking for magic doors by clicking on an icon - at the beginning stage of the game there are none. Or you can check your inventory of arms - likewise zero. You can also check the map which gives your relative position.

Legacy of Sorasil is a little like chess in that you move your people into position challenging skeletons and ghouls and ghosties and long leggedy beasties and things that go bump in the night and, at the end of the turn, each fights an enemy. There is much flashing sword work on both sides but direct contact appears to be avoided although the graphics are rather murky here.

How you kill your enemy is unclear to me but when you win a skull ascends into the heavens.

It is important that in the early stages you keep your small army together as if two pass through the first two gates one of them is, for sure, going to get nuttered. Strength most definitely lies in unity.

Standard infantry tactics apply - always cover your flank, always check your blind side.

With role playing games you need suspension of disbelief. You need to be absorbed in the game. For me this did not happen with *Legacy of Sorasil*. It is a well crafted game but it makes not my hormones jangle. It may well work for you. □

Ratings:

Graphics	80%
Sound	75%
Gameplay	85%
Overall	83%

Distributed by
Hotpoint (02) 634 6499
RRP \$69.95



MICHAEL SPITERI'S

Adventurer's Realm

Welcome once again to that part of the magazine for adventure and roleplaying gamers. It's the part of the mag where hints are given, problems are solved, views are aired, and classified adverts displayed in a poetic fashion. This month we continue our Super Hints series in which we flood the pages with hints and tips for numerous adventure games. Of course, hints are still available in the form of Kerrie's free hint-sheets, Realms hot hint

disks, and Realm's groovy hint books. Anyway, enough waffling, let's get down to business.

The Address: Adventurers Realm, 12 Bridle Place, Pakenham, Vic 3810.

The Rules: If it's hints you want, make sure you enclose a stamped addressed envelope. Otherwise we'd like to receive mail from you regarding any adventure topic. This is YOUR part of the magazine, so make the most of it!

Realm's Really Amazing Value Hint Disks

Orders for the Third Hint Disk are coming in thick and fast, and this month we are proud to announce the release of all three hint disks in PC format. Each hint disks contains detailed solutions for over 90 adventure games. Combine the three hint disks to cover over 290 different adventure and roleplaying games. Incredible, eh? These are the best dressed and most easy to use hint disks ever. Each features a very easy to use interface that allows you to display hints at a click of a button. Absolutely packed to the last remaining sector with hints and maps, each disk is priced at an absolute bargain at just \$7.00 (including p&p) or \$5.00 if you supply the disk and stamped addressed envelope. To order either disk send a cheque to Michael Spiteri for the required amount to Realm's Hint Disk, 12 Bridle Place, Pakenham, Victoria 3810.

Clever Contacts

Clever Contacts are readers who contribute their valuable time helping those stuck throughout the nation. Each contact has a specialised range of games they can help out in, and they are located throughout the nation. Drop a line to Kerrie's Free Hint Sheets for a complete Clever Contact Listing.

Jen Howell of 30 Frewin Avenue, Woodberry, NSW 2322 is already a Clever Contact but would like to expand her services to include the following games ... *Space Quest 4, Maniac Mansion 2, Larry 2, 3, Police Quest 3, Curse of Enchantia, Conquest of Camelot, Personal Nightmare, The Colonel's Bequest, The Black Cauldron, and Hero's Quest* (Sierra).

Anyone can be a Clever Contact and become famous. Finally, a big thank you to all the Clever Contacts for providing such a great service.

Free Hint Sheets

Hint sheet requests are coming in at an amazing rate, and Kerrie is being kept on her toes to get them sent out as soon as she can. It's not easy when the ballad singing troll is prancing around the house trying to dance with the grue. Considering the grue comes out only at night means nothing but destruction in this cave.

If you would like up to four of the hint sheets listed below then drop a line to Kerrie's Free Hint Sheets, 12 Bridle Place, Pakenham, Victoria 3810. Please make sure you check the list below before sending in your request, and you must enclose a stamped addressed envelope (or your request will not see the light of day).

Hint sheets available are: Mortville Manor / Maupiti Island, Monkey Island I, Monkey Island II, Space Quest III, Space Quest IV, Wonderland, Leisure Suit Larry 3, Champions of Krynn, Kings Quest V, Pool of Radiance, Zak McKracken, Zork 1, Zork 2, Zork 3, Bards Tale 1, Bards Tale 2, Bards Tale 3, Hitchhikers Guide to the Galaxy, Guild of Thieves, Jinxter, The Pawn, Corruption, Faery Tale, Indiana Jones and the Fate of Atlantis, Loom, Space Quest II, and the very latest 1994 Clever Contacts Listing.

Realm's Really Good Hint Books

Two great hint books are currently available. Volume 1 contains hints and tips to over 40 games, and Volume 2 contains hints and tips to over 25 adventure and RPG games as well as pages upon pages of mapping sheets. Volume 1 is only \$9.00 and Volume 2 is only \$10.00. To order either book, drop a line to Gareth Powell Publishing at 21 Darley Road, Randwick 2031, or ring (02) 398 5111.

Realm's Poetic Trading Post

Boy, oh boy, I thought my idea of converting all trading post ads to poetry in order to entertain those who couldn't give an emu's egg what you are trying to sell would really kill off this section. Well, the poetry has been pouring in, and man, it's pretty bad. Anyway, let's take a look at your efforts ...

There was a cool bloke
Harley Kingston to be precise
A 1200 he is trying to own
So all you hip folk
With \$40 (what a price)
Can make me groan
By making me part with
Civilization, Eye of the Beholder 2,
Space Hulk, or The Chaos Engine,
Alternatively you could maybe
Swap for Hired Guns, Cannon Fodder,
Dune II or the Settlers
Drop me a line at,
5 Ridge Street, Tamworth, NSW 2340

Mike: Well, not bad for a first effort, but it gets worse ...

There was a lad named Nigel Cayzer,
Who does not own a laser.
He lives at 39 Bortell Ave, Grafton NSW 2460
He has Monkey Island 2, Dune II, and Flashback to swap,
He would like Syndicate, or absolutely any decent game.
This ad gives him fame.
He also still has all games from the April (1994) issue.
And now he needs a tissue.

Mike: Arghhh! Oh no, there's more ...

I like not poetry,
I'm more intro prose,
which is why the following will probably be on the nose,
As to games that I wish to sell,
I have a bloody long list well, well,
It includes 36 games for the C64,
They may be on cartridge, cassette and 5 1/2 floppy more!!
And such a variety never seen before,
From Bruce Lee to Retro Ball,
from River Raid to The Hobbit.
For \$150, you can have the lot.

But let's start on the real subject matter,
'Tis about A500 games I wish to natter,
Battle Isle '93, Alien 3 and Sensible Soccer 92/93 can be had for 50 smacker
As well there's BC Kid (\$40), Robocod (\$20),
Moonstone (\$20), The Falcon Classic Collection - the original + mission disk 1 & 2 (\$50), Powermonger (\$20),
R Type 2 (\$20), AD&D Limited Edition Collectors set (\$30), etc. etc.
I know the last passage did not rhyme, but Hey, we can't be poets all the time.... Now if the lord of the Realm has done his job right, and managed to stay awake all night, there should be following this, a game price list, If note then I'm going to be extremely p****d.

Mike: I had difficulty staying awake throughout your poetry, Randal Beecham (of 6 Sedgwick Ave, Edgeworth NSW 2285, Phone (049) 58 3880), and you're not going to be happy because we have no room to print your list (maybe keep your poem shorter next time, for everyone's sake).

Meanwhile, Marina Ruetman sent in some slightly improved poetry ...

What I have to swap or sell,
might suit someone else as well,
I have Conquests of Camelot and Space Quest 3
All with hint books
Toowoon Bay, Lives me 67 Eloora Rd, 2261 NSW,
and just to make you help my sales,
I also have Manhunter 2, and the Godfather, he's through,
There's Lord of the Rings 1, for lots of fun
I have Kings Quest 4, that'll stop the bore,
I'll swap for the other Kings Quests or similar, Elvira, Monkey Island, etc. or sell for \$30 a piece,
neatly packaged and postage is free!

Mike: Not bad Marina. The following poetry is stuff I've concocted from those who sent in their ads before the poetry bit was announced. First up, however, is from John Serris, 58 Springvale Pd, Pascoe Vale South, Vic 3044 (Ph 03 386 8655 Tues-

day and Sunday only), whose excuse for not writing poetry was "lack of creativity" Well, John, that's not a requirement in this section, so make do with my efforts ...

A lonely A500 sits inside,
Some games it would love to ride,
Like Magnetic Scrolls series, for example,
and Zork and Bard Tales series as a sample,
In fact, any great classic, does John want to play,
Then his A500 will no longer be lonely, hey hey.

Ryan Bentley, of PO Box 2871, in South Hedland, WA 6722, yum. Has Flashback and Monkey Island 2, you see, to swap for Sensible Soccer, Fate of Atlantis, or anything else, hee hee. He will also swap SWIV, F16 Combat Pilot, Parasol Stars, James Pond 1, for anything good near Mars, Plus he wishes to swap ProPage 3 for Wordsworth or Final Copy.

Some old SSI games for Peter A Kelly, Including Queen of Krynn, Shadow Sorcerer, Pools of Darkness, all boxed with manuals, he needs. Will pay for \$60 each (for his A1200), that's no weeds. 3/4 Ormond Street, Ashfield, NSW 2131 is where he resides, so be the one!

Shane Viitanen of 2 Noolan Street, ho ho, Mount Gambier, SA 5290, Has Microcosm (CD32) for 95 smackers, Knightmare (A500) for 15 smackers, and Allan Border's Cricket for 25 smackers, So write to Shane, or phone on (087)232638, in vain.

Wanted! Wanted! Wanted!
Cries Ron Stolle of 14 Gerlee St, Tennyson, QLD 4185, hey Ed, Railroad Tycoon, Deliverance, Ports of Call, Transtarctica, Transatlantic, A Train, or same or all, For an Amiga, of course.

Mike: Finally, Andrew Lord of 13 Rainsford Terrace, Campbellfield, Vic 3061 (Phone 033573421 after 5.30 pm) sent in an ad that I found hard to convert, but here goes...

Greg Norman's Ultima Golf, Jack Nicklaus Greatest 18, 688 Attack Sub, Ivanhoe, Lost Patrol, that's mean, Lombard R.A.C. Rally, Epherical and Zak McKracken + clues, all for just ten smackers each, phew!

Then Godfather, East Vs West Berlin 1948,

Special Forces, Supremacy, but wait, include AMOS - The Creator, for twenty smackers each,

Plus Civilisation, Railroad Tycoon, Global Effect, Megafortress, Links Extra Courses, for \$30 per neck, All for sale for an A500 but Andrew would like, Larry V, Operation Stealth, Star Trek 25th, on your bike, Dune 2, Robocop 3, Curse of Enchantia, Black Sect, to buy or to swap or be hen pecked.

That's all for Realm's poetic trading post this month. So, if you are not a commercial retailer, pirate or such then send me your classified ad in poetic form and I'll print it free of charge.

Realm's Problem Centre

Aaron Burgess from Launceston in Tassie writes ... "I have a PD adventure game called *The Black Dragon* by Anthony Lynch and I cannot advance any further past the first dungeon. There are two rooms I cannot enter: one is at the top left hand corner of the map, and the other is located in a long passage just below it. I am also having trouble in room that closes the door behind me. This room contains a Flash Key which I have no idea how to use. Does anybody know where the spell book is?"

Mike: Let's hope someone can help

out, Aaron. Also, can anyone tell Aaron whether a game called *Missiles Over Xerion* (by Cycletech) is PD or commercial?

Michelle Pearson (PO Box 33, Croydon, Vic 3136) writes ... "I am playing *Fools Errand* and I am stuck on the following seven puzzles: the stone wall, the chapel, the children, the enchantment, the high priestess, the dream, and the three ships"

Mike: Can anyone come to the rescue for these dastardly puzzles?

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Realms Super Hints 1994

- Part Two

Did you like the Super Hints last month? Well, there's more this month from a wide range of sources, so enjoy!

Space Quest 3

Use the Grabber to move heavy things (warp motivator?) into the ship.

To get into the ship, climb up a ladder.

Use the laser and shields to blast your way off the junk freighter.

Use the gem to buy everything the guy offers you.

If the terminator has been terminated, he is not going to need his belt anymore.

Don't forget to stop at Planet Ortega. Are you wearing your thermal underwear?

Drop something explosive down the volcano.

Pole vault across the chasm.

Maniac Mansion

Use your light source sparingly, and use the "what is" command in dark places. Check out the car very thoroughly.

If the writing is too small, read it through a telescope.

That there is a strategically placed hamster.

Give the loose brick a good heave-ho.

Look under the house to deal with the floating chair.

Show the purple tentacle the sign of the law (should be in the dungeon).

Weird Ed is expecting a package, so make sure he gets it! (Get Dave to wait by the mailbox).

Champions of Krynn

The villager in Gargath has some interesting things to say, however refuse his offer for head protection.

The black dragons can be found in the Keep.

Violence is to be found at Jelek, so go to the place advised by Skyla and after some bashing visit the graveyard. More dragons to slaughter, more treasure to obtain. Don't forget the rose.

Stinking clouds are your best bet at destroying the Minotaurs at the Sanctum. You'll get a nice gift after you rescue the woman. Her gift can be used to explore the temple of the Shadowpeople (they will tell you how to get the Dragonlance).

Pools of Radiance

Break down the doors to inside Mendors Library. Defeat the Basilisk here using mirrors. Heaps of books are to be found here, especially about philosophy and history.

You have to track down and destroy Norris the Gray who can be found down Kuto's Well. Lots of goodies to be found here. After the fight, the well will make a good hideout.

Tread carefully in Koval Mansion. As well as plenty of treasure and money to be found here, you must also keep your eye out for weapons and maps. Fight the thieves in the jail to help the old thief.

A camp in the wilderness to check out is the Slave Camp. The main task he is to rescue a young boy from the slave cages.

To earn some valuables, check out the Nomad Camp and fight the kobolds. Rewards and new friends are abundant after the final battle.

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Surf Ninjas

Ratings:

Graphics	70%
Sound	70%
Gameplay	75%
Overall	73%

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Hotpoint (02) 634 6499
RRP \$69.95

Let us accept the fact that if you can have teenage mutant ninja turtles you can have surf ninjas. For those

of you who are not precisely clear what ninjas are, I should perhaps mention that they were an offshoot of a Buddhist sect in Japan. They were trained in assassination as a religious end. If they were sent on a job and succeeded, when they returned they were allowed to commit suicide among much general rejoicing.

This game has good graphics and has you, the hero, a muscle bound bruiser who looks as thick as two short planks - and is probably a neo-nazi with it. Dressed in Doc Marten's bovver boots and politically correct dungarees you wander off in search of adventure.

Basically it is all biff and bash and some nasty Romper Stomper techniques including head butting and partial disembowelling. But, hey, if you are going to fight surf ninjas you can't afford to be squeamish.

From playing this game I have managed to work out the following points:

young Brits. Who else would suggest that you, the hero, find a copy of the magazine *Euro Soccer*?

That was in the real world. In the world of video games ninjas have kept the distinctive dark clothing of the original ninjas but abandoned weapons in favour of kung fu.

The story line in *Surf Ninjas* does not matter over much - just beat the crap out of anyone - always ninjas who come in pairs - who gets in your way. Yes, there are clues and problems and these are amusing and show that the programmers are

- If you hit a ninja four times with a baseball bat it discourages the ninja.
- There is an apparently endless supply of ninjas.
- You have to wait for a jumping ninja to descend before you can thump him.
- You can always walk away from a ninja - but there are two more waiting for you down the block.
- When in doubt leap in the air. Most ninjas seem to spend their time trying flying kicks.
- Do not dine at the Imperial Palace restaurant if you want good service. Every time you look at the menu two ninjas come in and kick the crap out of you.

This is not an aid to digestion.

• The surf ninja gang seems to hang around Sydney Harbour a lot. Is one of the programmers Australian?

• Ripping ninjas' guts out may sound revolting but it discourages them permanently.

• Ninjas do not like being punched in the nuts.

That should see you through. Go for it. May the force be with you.

GARETH POWELL





GLOBAL EFFECT

Ratings:

Graphics	78%
Sound	65%
Gameplay	80%
Overall	75%

Distributed by
Hotpoint (02) 634 6499
RRP \$69.95

There is an Australian poem that starts with a gripping line which runs very roughly:

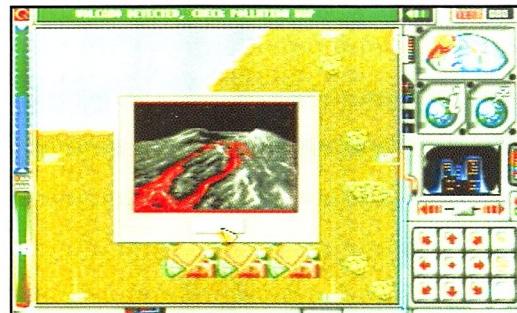
"I would like to meet the man who invented ring barking,

And shake him by the neck . . ."

This is what you might call the extremist greenie view. Even if you are a great supporter of national parks and wild life areas - and every right thinking person feels that way - the fact is that if we had followed the extreme greenie viewpoint there would be now no farming in Australia, no industry and very few jobs. This is not an excuse for strip mining or clear felling or wide scale pollution. But the sad, simple and unescapable fact is that where humanity and nature in the raw collide something suffers - and it is normally nature in the raw.

Greenies may sometimes go too far but they have had the salutary effect of making us think of our planet and how we want to leave it to future generations.

Global Effect by Millenium takes it a step further. It is a game intended to emphasize the effect that civilisation - however you want to define it - has on a planet. It is a game of



ecological balance where you are continually dealing in trade-offs.

To my mind it is very like the game *Civilisation* where you build a country from scratch and make a wide range of decisions which can end in triumph or disaster.

Global Effect opens with good quiet music and you are offered a wide range of options for the type of area where you will establish your own corner of civilisation.

It is at that precise moment you encounter the problem with this game - the manual is, to be polite, skimpy. It reads after a few paragraphs of description: "Having chosen your playing options, you will enter the game display. The Game Guide sheet demonstrates how the Government Console (GovCon) is set out, and what each of the individual functions represents and performs. Also displayed are the various construction tools available to use to build a thriving colony."

Well, yes, this is true. But the Game Guide sheet is very small and the plan shows the details in minute type. Yes, you can use it - I did. But it is not easy. I did think of making cut-out symbols to stick around my computer screen as a cheat sheet.

But when you start playing you are hooked. The game with its snazzy graphics looks really interesting and once you get involved it is very, very interesting.

What *Global Effect* reminds you of constantly is how the ecological balance of any environment is easily upset, put

out of kilter.

To start building your world you choose the sort of environment that appeals to you. I choose "richly forested". I need to clear some of the forests before building a city. And I need to do it with care and delicacy so as not to upset the environment.

I start with three sheep farms, a dam, four solar power stations followed by the first city block. I know this can hardly adversely check the environment but, to make sure, I whip through a series of screens that tell me, yes, the ozone layer is protected, there is no global warming, I have created no radiation and so on.

Pride ever goeth before a fall.

Sadly I have started to build my city on the equivalent of the San Andreas fault and an earthquake quickly destroys my first attempt at civilisation.

Back to the drawing board.

Basically *Global Effect* is *Civilisation* or *SimCity* with greenie overtones and none the worse for that. Anyone playing it will get a very clear idea of how ecological balance works and why siting a nuclear powered station in an area prone to earthquakes is not, in itself, a good idea and how ringbarking and destroying a forest can eventually, eventually, lead to the end of a civilisation.

Global Effect is truly edutainment.

GARETH POWELL



Neptun-Genlock



Title & Graphics



Trick effects



Alpha channel



Auto fading

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